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PAPER
PROCEEDINGS

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UNIVERSITAS INDONESIA
10 – 11 OKTOBER 2017
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Welcome Remarks

Prof. Dr. Ir. Muhammad Anis, M. Met.
Rector

Welcome to Universitas Indonesia!

On behalf of Universitas Indonesia, I would like to express our sincere appreciation and gratitude to you, prominent scholars and academics, for your participation in this event.

We are gathering here today to reunite our spirits and effort in answering the challenge of international movement that is “Sustainable Development Goals” (SDGs). Various aspects have been visited by SDGS, not only those dealing with human rights but also those dealing with the basic needs of humanity. It is undeniable that no poverty, no hunger, good health, quality education, gender equity, clean water and sanitation, renewable energy, good jobs and economic growth, industry innovation and infrastructure, reduced inequalities, sustainable cities and communities, responsible consumption, climate action, life below water, life on land, peace and justice, can only be achieved by partnerships for the goals. States are expected to walk side by side in forming the better society and the better world. That is the very core of objective in having this event, to make every one of us believe that nothing could not be formed as long as we stand together and hand in hand to realize the SDGs for the prosperity of world community.

Among you are specialist in various sciences from health science, science and technology as well as social humanities, and we need to be ready to play our own role in promoting human security and education role in shaping the community for forming the better world. The strategic theme “Shaping the Better World” is very clear in sending the message that we as the academicians are bound also to build up our own partnership in achieving the SDGs including in equipping the society by training young generations as our future agents in building the much better society living in much better world.

May you have a very fruitful Summit!
Greetings from Universitas Indonesia!

I am delighted to welcome you to UI Scholar Summit 2017 in Universitas Indonesia, dedicated to theme “Shaping the Better World”.

As a first leading comprehensive university in Indonesia, we are at the forefront of three pillars of higher education; academic, research, and community engagement. As a nation’s flag carrier university, we are aware of our role in the development of the country and our contribution for the regional and global challenges.

It is our commitment to activate our cooperation with foreign partners and improve its implementation. Over the years, our international cooperation with universities worldwide have been continually developing, its among our internationalization strategy where Universitas Indonesia is committed to take part in various field and contribute to address national, regional and global challenges.

The “Scholars Summit 2017 : Shaping the Better World” is held to enhance the interaction between UI scholars and our foreign partners as well as to synergize the efforts in order to shape the better world through academics findings. Universitas Indonesia is clearly aware that higher education is challenged to be continuously enriched by having quality education, sound research and beneficial community engagement as well as to give advocacy to the decision makers in any policy making and strategic plan. Thus, we encourage every one of you to be with us and share with us all the good things being a scholars and to keep believing that all the big changes will always be initiated by a small step. We could make an improvement and develop the globalization for the prosperity and the greater good of the world society by our small steps in making this Summit a successful one.

Have a fruitful academic collaboration!
Dear Honorable Scholars,

Greetings from International Office of Universitas Indonesia!

We are pleased to have you here at Universitas Indonesia, the best and oldest universities in Indonesia. With almost 160 years experience within growing and changing academic field, we invite all scholars around the world in celebrating the positive spirit of developing international education.

The background of this event is originally initiated from the awareness that we have widely international counterparts across the world and we are challenged to improve access to qualified high level of education, tightened interactions among us to shape the better world and to write our names in the realm of globalized movement. That is why we title this event as “UI Scholar Summit 2017: Shaping the Better World”.

In this event, you will have an opportunity to share your thoughts and idealism among partners. It is our opportunity to unite our efforts as scholars in making our contribution in developing much better world for our next generations. Intergenerational equity is something to hold on as our responsibility in making the good environment and conditions for our grand children, great grandchildren and all generations to come.

I would like to take this chance to express my appreciation to all the leaders of Universitas Indonesia, Rector and all Vice Rectors, for the endless support and trustworthy to us in organizing this event. We are thanking our Deans and Research Managers as well as scholars from various faculties whom have been tremendously trying to work together with us in preparing everything necessary. Lastly, of course my thankfulness is given to all member of the Organizing Committee, for their remarkable effort and dedicated work in preparing the local arrangements. Without them this event would never be happened.

Have a productive and fruitful networking!
HEALTH SCIENCE
QUALITATIVE RESEARCH INQUIRY IN INVESTIGATING HEALTHCARE SERVICES

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Abstract
In healthcare study, qualitative method is widely used to gain in-depth insight of the phenomenon. The paper aimed to highlight qualitative research design to investigate healthcare services at public hospitals. Qualitative research in sociology is widely adopted to investigate the sensitive matters of the society and social institution. In the present study, to examine the healthcare system by using qualitative research was challenging but interesting to know many aspects which are neglected through quantitative research. The in-depth interview technique of getting information and observational technique furthermore enlighten the researcher with rich data to establish the ample analysis for study. The interviews and observation makes the study triangulated to verify the different aspects of healthcare from the perspective of doctors, patients and staff. The validity, reliability, triangulation and trustworthiness of the qualitative data also reflected upon the truth and generalization of the study. The study concluded the qualitative technique more constructive to get in-depth analysis of healthcare services from various perspectives of health system. The selection of the qualitative research design enabled the researcher to gain deeper insight on the subject matter. Thus qualitative research moves beyond the statistical facts and extract the fundamental meanings of the collective experience to establish quintessence of knowledge. In this regard, qualitative technique ensured to seek thorough data on the matter of concern from different perspectives. It appears an inductive style of researching which focuses on individual meaning rather the researcher’s interpretation of the problem.

Keywords: Public Health, Qualitative Research, Healthcare Services

1. INTRODUCTION
In healthcare study, qualitative method is widely used to gain in-depth insights of the phenomenon (Error! Bookmark not defined.). Furthermore, this chapter also discusses the methods and techniques used to collect data under qualitative paradigm which are in-depth interviews and observations. Healthcare researchers widely use in-depth interviews to gather more accurate and in-depth information about healthcare and its related aspects (DiCicco- Bloom & Crabtree, 2015). Interviews are the most common and useful method of data collection for qualitative research (Potter & Hepburn, 2005). The observation technique as Hancock (2006) asserted determines the working and hygienic environment of the hospitals in order to have an eye view of the process of delivering healthcare services and it was also employed in the study.

2. METHOD
The paper is consisted of reviewed articles on qualitative research techniques in healthcare published in various indexed social sciences, qualitative research methods
and public health journals. All the papers were accessed by using PubMed and MEDLINE database and screened the actual research studies reported different dimensions of the quality of healthcare. As the focus of my study was maternal healthcare, therefore after the vigilant review, 50 articles were studied and included in the paper which focuses on qualitative methods used for healthcare researches. The articles based on reports, reviews and published book text were also included. After thoroughly reading the articles, main points were highlighted and summarized as review followed by the critical analysis of the given description.

3. RATIONALE FOR QUALITATIVE RESEARCH DESIGN

The present study employed qualitative research design under which phenomenological inquiry was carried out. Patton (1990) elaborates that phenomenological study focuses on studying the experiences of the participants about a particular phenomena. Schwandt (2000) provides a phenomenological interpretation of the qualitative research which is best described as subjective knowledge of the study from the participants’ perspective. Thus, qualitative research moves beyond the statistical facts and extracts the fundamental meanings of the collective experience to establish quintessential of knowledge. In this regard, qualitative technique definitely seeks thorough data on the matter of concern from different perspectives.

Verhoef and Casebeer (1997) and Creswell (2012) state that qualitative research approach focuses on narrative and open-ended interview techniques to seek more in-depth information from the respondents. It appears as an inductive style of researching which focuses on individual meaning rather than the researcher’s interpretation of the problem. Neuman (2005) further elaborates that qualitative research is generally endowed with investigating social life from the perspective of someone who deals with it on daily basis. Undertaking qualitative research with the vulnerable population provides a unique opportunity to the researcher to comprehend the subject matter from varied standpoint (Liamputtong, 2006).

The researcher perceived the qualitative technique as more constructive to get in-depth analysis of healthcare services from various perspectives of health system. Murphy et al. (1998) also prefer qualitative research in studying health related issues because of its nature of gaining deeper insights into the health professionals’ observation and experience in healthcare delivery and classification of barriers to changing healthcare practices. A number of recent researches (Meyer, Karbach, & Holmberg, 2012; Rachel, Anglin, Glik, & Zavalza 2012; Liamputtong, 2013; Herbeck, Brecht, Christou, & Lovinger 2014; Boeri, Gibson, & Boshears 2014) on healthcare also suggest that qualitative research methods are more appropriate for studying the personal experiences of healthcare sciences.

Qualitative research enables one to study real world inductively in a naturalistic manner of inquiry with narrative descriptions of the data (Patton, Patton & Quinn, 2005). It provides an alternative to the research which is not well suited to use conventional theories in scientific manner (Giacomini & Cook, 2000). Furthermore, qualitative research represents two rational standpoint; the interpretive and critical research paradigms, which are mostly used in mental health research (Fossey et al., 2002).
In addition, Salazar, Crosby and DiClemente (2006) maintain that qualitative research is incredibly imperative to enable policy makers to design effective-evidence based health promotion strategies and programmes. Grbich (2013) supports that qualitative research enables the researcher to gather detailed information and generate knowledge in various ways. It gives insights into people by exploring modestly identified social issues. Barbour (2013) and Gill et al. (2008) highlight the flexibility of time and financial resources required which are considered as the hallmark of qualitative research.

4. DATA COLLECTION TECHNIQUES

4.1. In-Depth Interviews

In-depth interview is based on the conversation between the individuals which requires active asking and listening skills. Qualitative interviews can be used to yield investigative data that may or may not generate theory (Hesse-Biber & Leavy, 2010). It constructs comprehension that is usually contextual, linguistic, narrative and pragmatic in nature (Kvale and Brinkmann, 2009). It allows the researcher to interpret the data in their own words (Liamputtong, 2009). Open-ended questions are the key feature of qualitative interviews which allows respondents to give as much information as possible and allow the ordering of questions based on interviewee’s interest and priority (Barbour, 2013). Interviewing in qualitative research is the reflection of the researcher’s conversational skills persuaded by research ethics (Rubin & Rubin, 2012). Semi-structure interviews are known as non-standardized or qualitative interview. Saunders, Lewis and Thornhill (2009) encourage the interviewees to share their personal experiences and stories regarding the particular issue the interviewer wants to explore empirically (Boeije, 2002; Wahyuni, 2012). Hancock (2006) asserts that semi-structured interview involves a series of open-ended questions based on the extent of the subject the researcher wants to cover. It enables both the researcher and the respondents to discuss the issues in more detail and the interviewer can use probes to encourage the interviewees to elaborate and provide additional response on the subject matter.

Interviewing women allows the opportunity to better understand women’s experiences from their point of view. The design of an interview schedule for qualitative interview consists of a series of open-ended questions allied with the research objectives. The researcher employed semi-structured interviews consisting of open-ended questions which enabled participants to provide detailed information on the topic. Bloyce (2004) states that loose structure of open-ended question for semi-structured interviews enables both the interviewer and interviewee to produce extensive information. The structure of questions should be neutral and understandable. The sequence should be easy question asked at first proceeded with complex or sensitive questions at the end. It enables respondents to build up good rapport with the researcher and achieve self-reliance to endow the researcher with rich information on the subject matter. In order to obtain a contextualized interview, Oakley (1981) recommends open-ended questions to probe and explore women’s narratives from their perspective. Thus, with semi-structured interviewing, the interviewee plays a dynamic role in conducting the conversation and providing answers that reflect their lived experiences and consequently conceded women’s experiences as genuine.
A semi-structured interview guideline was developed after reviewing extensive literature as well as discussing with experts in the field. Firstly, interview guideline was designed under the guidance of a research supervisor and then the draft of the interview guideline was given to health professionals for their valuable and expert opinion regarding the relevance of the instrument with the study objectives. The researcher incorporated all their valuable suggestions and comments in the final design of the interview guideline. After validating the guideline from the supervisor, the interview guideline was translated into Urdu as the majority of the respondents understand Urdu language only. The translation was carried out by language experts, firstly Urdu language expert translated it into Urdu, and secondly it was back translated into English by an English language expert. The back translation verified the wording and its associated meaning in both languages which meets the research objectives. The researcher used bilingual technique to communicate with the respondents as all of the doctors and staff was able to speak in both English and Urdu. Some of the literate patients used both languages. On the other hand, Urdu language was used to interact with the general patients in the hospital.

The interview schedule addressed three broader research questions followed by the sub-themes of the study to determine each research question. Each theme was sub-divided into other themes which addressed the relevant open-ended questions asked to the respondents. The structure of the question was similar for the three groups of respondents but the sequence and language were changed according to the level of understanding of the participants. The researcher became accustomed with Berge's (2007) description of interview schedule comprising of four styles of questions; essential questions, extra questions, throw-away questions and probing questions. Essential question reflects the broader focus of the study, extra question verifies the responses to measure the influence of change of language. Throw-away question consists of general starting questions used for rapport building and demographical questions. Probing question helps the interviewers to find out more information about the subject matter.

For the purpose of this study, the researcher used a self-designed interview guideline based on open-ended questions without giving any direction or required answer to know the real response of the participants. Lots of probing was required to get more information which was the most difficult task, as participants gave only short responses. The researcher prepared the questions which reflect the research questions of the study followed by some questions related to particular themes as well as concepts and ideas highlighted by the respondents. Rubin and Rubin (2012) state that probes are the most important part of an interview which accelerates the discussion on the subject matter. Therefore, the researcher employed extensive probing to collect rich information from the respondents. Different probes were extensively used according to the nature of the information provided by the respondents.

The primarily designed interview guideline was verified by doing a pilot study before commencing on the final study. To validate the interview guideline, pre-field work was conducted at the same hospital under study with a different sample. Interviews with two patients, one doctor and one nurse were conducted as pre-field work. The length of the interviews varied from 45 minutes to an hour (May, 1991). Some important issues were highlighted during pre-field work such as: sequence and importance of questions and
interviewing technique. Some questions were not relevant to the patients which were modified according to the patients’ perspectives.

4.2. Observation

The study also engaged two types of observation; participant and non-participant to make the data more reliable by examining the actual behaviour of the doctors and patients with each other as well the staff of the hospital with the patients. Participant observation is the widely accepted and used method in anthropology which is now accepted and utilized in sociology too. It is endowed with studying social practices in a naturalistic way analogous to the “fly on the wall” (Barbour, 2013:13).

In healthcare assessment, observation facilitates the determination of the availability of services, such as equipment, beds, drugs, living condition, etc. Bernard (2011) illustrates that the daily activities of an individual’s life can be appraised through observation. It assists the researcher to gain insights into people’s activities, their relationship with each other as well as they working and living environment. It also measures discrepancies between informants’ perspective and the reality on ground.

Two types of observation checklist quoted by Mulhall (2003) are structured and unstructured. The selection of either type depends on the nature of study. Structured observation is usually preferred by positivist researchers and un-structured by interpreters. In observing the availability of healthcare resources, the researcher developed structured checklist to mark the available facilities but it was not exhausted in nature as supplementary notes were also taken regarding the normal activities performed in the hospital and wherever allowed some pictures to be taken as evidence. As MCH has different sub-units, for instance, OPD, wards, private rooms, emergency and labour room, separate non-participant observations in each section was made on different dates. The researcher observed a number of beds and their conditions, living facilities in wards and private rooms. The general environment of the units, cleanliness, and the condition of the doctor, staff and patients’ room were also observed.

In participant observation, the researcher noticed many interactions between patients, doctors, nurses and administrative staff while helping out the nurses and doctors in guiding the patients to get their registration card. Both positive and negative interactions of doctors and nurses with the patients were noted. Many time negative interactions were very depressing for the researcher and forced her to think why they have chosen this profession. The researcher felt bad while observing the negative interactions which occurred more than positive ones and while interviewing the patients. But it is evaluated that although there were many hegemonic situations between doctors and patients they never repudiate the patients. Sometime even doctors were scolding the nurses and staff for delaying treatment given to the patients.

5. DATA ANALYSIS PROCEDURE

Data analysis constitutes an illustration of inference from raw data (Patton et al., 2005). In qualitative research, raw data are based on text which needs to be managed into a form of storage with transcribing and cleaning in the first stage of preparing data for
In order to accomplish qualitative analysis, data is mainly dismantled, segmented and reassembled to deduce consequential findings (Boeije, 2002).

The present study primarily adopted thematic analysis approach to interpret the data. The aim is to identify the commonalities and differences in the respondents’ perspective. The research described, analyzed and interpreted the information gathered from various respondents. The researcher performed verbatim transcription of the recorded interviews which is the commonly used method to transform verbal data into textual form for the interpretation (Halcomb & Davidson, 2006). The recorded data were transcribed from Urdu to English. The transcription was again given to the doctors and some of the patients to counter-check the information they had provided. The analysis of the study is applied phenomenological data analysis technique which according to Creswell (2013) proceeds by developing specific themes and interpretation of the underlying meanings. The heuristic process of generating themes to give meaning to the data in phenomenological analysis based on logical steps described by Moustakas (1990) comprises of immersion, incubation, illumination, explication and creative synthesis respectively. The present study followed these steps in doing phenomenological analysis.

After transcription of the interview, the researcher organized the data under different codes by following the immersion process. The extra information provided by the respondents which did not fit into the research objectives was omitted from the description. The data were then organized in themes by applying inductive thematic analysis. Thematic analysis suggested by Attride-Stirling (2001) summarizes the data in step-by-step procedure aided by rich analysis of textual data. Thematic analysis identifies the patterns/categories and integrates responses containing the information gathered from varied respondents. Braun and Clarke (2006) also favored thematic analysis as an appropriate technique for qualitative research in health system.

Data analysis in qualitative research consists of systematic process of organizing, coding, writing, theorizing and reading the raw data which generates themes (Tucket, 2005). King and Horrocks (2010) recommended three stages in the process of thematic analysis; stage one comprises of reading the transcript and highlighting relevant materials to establish codes. In stage two, clusters of the codes are made and meaning of clusters is interpreted in relation to the research questions. While the third stage of analysis reflects upon driving key themes for whole data by linking with the theoretical stance of the study.

Themes help to identify the relational information from the data to identify similarity and discrepancy (Richards, 2005; Wong, 2008). The process also assists the researcher to develop deeper insights into the data for fabricating analysis (Liamputtong, 2009). It transforms the larger data into small categories to explore the pattern of the information to draw the connotations that permit the construction of rational indication (Patton et al., 2005).

Traditionally, the process was performed manually by copying and pasting the data and categorizing data by using different coloured pens. Recently, a number of computer assisted technology and software packages make the process much easier in generating codes and themes. The researcher used ATLAS.ti software to generate codes and...
themes from the data. ATLAS.ti facilitates storing, organizing and coding of the conversational and textual data under different themes (Paulus & Lester, 2016).

Interviews were transcribed personally throughout the data collection process which enables the researcher to analyze and make possible amendments to probing questions during data collection to smooth the progress of a supplementary inclusive understanding of experiences. Transcriptions were placed in Microsoft Word documents. During early data analysis, the researcher listened to and read all transcriptions in their entirety and then extracted significant statements and conversations from each interview. Afterward, the researcher looked for patterns within the women’s answers to questions, concentrating on similarities and differences across women’s discussions of various topics. The statements and conversations were formulated into various meanings. These meanings were clustered into themes that relate to the journey into motherhood experienced by the participants.

The data in this study were analyzed by developing themes and sub-themes. Reporting and interoperating the qualitative data is a very meticulous task. The present study employed three interrelated concepts of assessing maternal healthcare services i.e. structure, process and outcome. Thematic data analysis technique was used by following the process of immersion, coding, categorization and theme generation. Initially, the researcher aimed to draw a broad-spectrum description of women’s experiences of healthcare services Interviews provided more data than expected. Number of times the transcriptions were read to extract more comprehensive information related to the specific purpose of collected data. Various themes come forward from the data which were placed in a variety of different categories by using ATLAS.ti software.

After organizing data in ATLAS.ti, themes were generated and by adopting phenomenology technique, thematic analysis was preceded. Creswell (2013) emphasizes on phenomenology to examine participants’ experiences in healthcare and relate their experiences with the observable fact of healthcare services. Braun and Clarke (2006) further highlight that thematic analysis helps in identifying, analyzing and reporting patterns from the data to illuminate the healthcare experiences of the respondents. By employing constant comparative method, the information obtained from three different types of respondents as well as the data collected from interviews and observations were compared and contrasted with each other.

6. CONCLUSION

To sum up, the study concluded the qualitative research journey enriches the researcher’s experience; intensifying gratification of work and learning to discover new knowledge. However, it would not be possible to learn these skills without having experienced the issues associated with insider knowledge, reverse cultural shock and role ambiguity. These techniques moreover enabled the researcher to manipulate her own subjectivity and improve the credibility of the research endeavour. The selection of the qualitative research design enabled the researcher to gain deeper insight on the subject matter. Qualitative research in sociology is widely adopted to investigate the sensitive matters of the society and social institution. To examine the healthcare system by using qualitative research was challenging but interesting to know
many aspects which are neglected through quantitative research. The significance of choosing the qualitative design is to get deeper insights into three different but interrelated concepts of healthcare i.e. structure, process and outcomes. The in-depth interview in getting information and observational technique furthermore enlightened the researcher with rich data to establish ample analysis for study. The interviews and observations triangulated the study to verify the different aspects of healthcare from the perspective of doctors, patients and staff. The researcher perceived the qualitative technique as more constructive to get in-depth analysis of healthcare services from various perspectives of health system.

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HALAL STATUS OF DERMATOLOGY AND OTOLARYNGOLOGY MEDICINE: AN EXPLORATORY SURVEY

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ABSTRACT

All Muslim seek for treatment needs halal medicine. However, the halal status of medicine that they used is unknown. Furthermore, the references regarding the halal status of medicine are scanty and few. This study are hope to fill the gap in literature on halal medicine. The objective of this study is to explore the halal status of dermatology and otolaryngology (ENT) medicine stored at University Malaya Medical Centre (UMMC) and Hospital Angkatan Tentera Tuanku Mizan (HATTM). Sources of Active Pharmaceutical Ingredient (API) and excipients obtained from product leaflet were assessed for Halal status based on information obtained from standard references and pharmaceutical company. Halal status of the products' sources are categorized into halal, mushbooh or haram. From 82 API obtained from dermatology and otolaryngology (ENT) products, 68.3% of API are found to be halal while other 31.7% of API are categorized under mushbooh. Furthermore, from 95 excipients obtained from dermatology and otolaryngology (ENT) products, 57.9% of excipients are found to be halal while other 42.1% of excipients are categorized under mushbooh. All ingredients that are categorized under mushbooh are related to the presence of ethanol, unknown sources of animal and sources of unknown origin. Besides that, a basic mobile apps manage to be developed since it can be used as a tool in providing information regarding halal status of pharmaceutical products. In conclusion, cooperation between pharmaceutical company and competent authority are vital in order to obtained and produce halal medicine.

1. INTRODUCTION

Halal pharmaceuticals is defined as medicinal products that contain ingredients permitted by Islamic Law. In order to consume halal medicine, Malaysian Halal Pharmaceutical General Guideline (MS2424, 2012), have stated the criteria and requirement that are needed. First, the medicine must not contain any products or parts of animals that are non-halal or not slaughtered according to Islamic Law. Besides, the medicine also must be non-poisonous, non-intoxicating and non-hazardous to health according to prescribed dosage. In other words, it must be safe for human use.
Furthermore, the medicine must not contain any human parts or its derivatives that are not permitted by Islamic Law. Besides, the medicine preparation, handling, processing, packaging, storage and distribution must not contain or contaminated with najs. There are five criteria of najs described by Islamic Law. Firstly, najs are dogs, pigs, their descendents and derivatives. Secondly, najs also include any liquid and objects discharged from human beings or animals. Examples are urine, blood, vomitus and pus. Next are alcoholic beverages and intoxicants. Besides, najs also include halal animals that are not slaughtered according to Islamic Law. Finally, pharmaceutical products that are contaminated or come in direct contact with items that are non-halal.

So, in order to have halal pharmaceutical products, the products need to fulfill the requirements stated and be separated from any other products that do not meet the requirements.

The main concern and issue related to halal pharmaceuticals is lack of awareness and knowledge on the halal status of the medicine among the Muslim consumers and patients. Besides that, the availability of halal products in the market is also scarce due to the accessibility of the raw materials and ingredients that are halal certified. Furthermore, references on halal status on specific medication are undocumented and scanty. These factors also may contribute to the low level of awareness among consumers. Thus, it is hope that this research may help people especially Muslims to explore the halal status of pharmaceutical by focusing on two categories of medicine which are dermatology and otolaryngology.

2. METHODS

2.1 Preliminary requirement (Hospital approval)

An exploratory study was done at University Malaya Medical Centre (UMMC) and Hospital AngkatanTenteraTuankuMizan (HATTM). Before the study begins, letters were sent to the Heads of Pharmacy Department of University Malaya Medical Centre (UMMC) and Hospital AngkatanTenteraTuankuMizan (HATTM) to gain access to the pharmacy department of the respective hospitals.

2.2 Data Analysis

The active pharmaceutical ingredients (API) and excipients collected will be first categorized according to its respective source. This was in accordance to the Halal Pharmaceutical General Guideline (MS2424, 2012) where drug sources are divided into plant, animal, mineral, microorganism, synthetic, semi-synthetic, genetically modified organism (GMO) and natural chemical. This classification is important in order to assess the halal status of the product.

Many formulations and ingredients used in pharmaceutical preparation are complex. Thus, one of the solutions to determine the source of ingredients is by asking directly the pharmaceutical company. So, the first method used to assess the sources of API and excipients is by approaching the manufacturer.
through letter. All the API and excipient obtained from the product leaflet were included. For oversea manufacturers, the letters were sent to the product license holders, while for locals, the letters were sent directly to the manufacturers. The manufacturer and product license holder were asked to fill in the sources of the API and excipients. Besides that, halal certification is also asked to be attached, if available. National Pharmaceutical Control Bureau (NPCB) product registration website will be used to track the manufacturer details based on the MAL number if the information in the product leaflet is insufficient.

For the second method, the source for each of the API and excipients used in the products was determined by using the standard references. The standard references used were British Pharmacopeia (BP), Martindale, Remington, Merck Index and United States Pharmacopeia (USP).

The assessment of the final pharmaceutical products will depend on the source of API and excipients used. If both of the ingredients used are halal, the final product will be categorized as halal. If the product consists of halal and haram ingredients, a serious category would be selected and the final product will be haram. Finally, if the product consist of halal and mushbooh ingredients, the final product is classified as mushbooh. All the data collected were analyzed using Microsoft Excel.

3 RESULTS AND DISCUSSION

Total number of dermatology and otolaryngology (ENT) products available in both UMMC and HATTM hospital during the period of study were shown in and Figure 3.1. From the figure, it shows that the total number of products obtained are 67 products.
Figure 3.1: Percentage of dermatology and ENT products obtained from UMMC and HATTM

3.1 Pharmaceutical company response

Out of 67 dermatology and otolaryngology (ENT) products, the information for only 30 products were supplied by pharmaceutical company. The distribution number of products are shown in Figure 3.2. All the products were replied by 12 pharmaceutical company out of 26 pharmaceutical company.
Figure 3.2: Percentage of dermatology and ENT products supplied by pharmaceutical company

3.2 Active Pharmaceutical Ingredients (API)

The halal status of 82 API obtained from both dermatology and otolaryngology (ENT) products are shown in Figure 3.3. From the figure, it shows 56 API are halal while other 26 API are categorized under mushbooh.
Total of 82 API was obtained from 67 dermatology and ENT products. The *halal* status of the API are shown in Figure 3.3. The source of the API was determined based on information obtained from standard reference and response received from pharmaceutical company. From evaluation, 68.3% of the API have found to be *halal* because these APIs are free from animal source and ethanol.

Besides that, 31.7% of the API source are categorized under *mushbooh*. This is because some of the API may be derived animal. For example, betamethasone and glycerol. Betamethasone may be derived from progesterone while glycerol may be derived from animal fats. Furthermore, there are API where it is difficult to obtain accurate information regarding their source and origin. In other words, the source of the API cannot be obtained from the standard reference and the manufacturer. This unknown source of the API also will be categorized under *mushbooh*.

### 3.3 Excipients
The *halal* status of 95 excipients obtained from both dermatology and otolaryngology (ENT) products are shown in Figure 3.4. From the figure, it shows 55 excipients are *halal* while other 40 excipients are categorized under *mushbooh*.

![Bar chart showing halal status of excipients](image)

**Figure 3.4:** Evaluation of the *halal* status of excipients found in the combination of dermatology and otolaryngology (ENT) products in percentage.

A total of 95 excipients were obtained from 67 dermatology and ENT products. The *halal* status of the excipient are shown in Figure 3.4. A total of 57.9% of the excipients were found to be *halal* because the excipients are all free from animal source and ethanol.

Besides that, a total of 42.1% of excipients source are categorized under *mushbooh*. This is because some of the excipients may be obtained from animal. For example lactose, polysorbate and citric acid monohydrate. Lactose may originate from milk and bone related substance. Polysorbate may be obtained from animal fatty acid and citric acid monohydrate may be obtained either from plant or animal. Besides that, there are excipients which are difficult to obtain accurate information regarding their source and origin. This unknown source of excipients also will be categorized under *mushbooh*. Furthermore, ethanol also will be categorized under *mushbooh*. Since there are no response received from the pharmaceutical company regarding the source of ethanol, that is the reason why ethanol are still considered under *mushbooh*.
There is only one product which is an otolaryngological product that contains ethanol which is used as excipients. Since no response was received from the pharmaceutical company, thus the product is considered as mushbooh. Only ethanol are consider as impure (najs) because other forms of alcohol such as pentanol, allyl alcohol or cetyl alcohol are not considered as impure (najs) since their chemical structure are different to ethanol.

According to e-fatwa which is the official website of National Fatwa Organization, the scholars have agreed that medicine that contains alcohol as a solvent agent is not impure (najs) and is permissible, provided such alcohol is not extracted from the winemaking process. Thus, it is vital to obtain information from the pharmaceutical company to ensure that the ethanol used are not extracted or obtained from winemaking company.

4. CONCLUSION

Since there are API and excipients which are categorized under mushbooh, it is important to notify healthcare professional since the majority of Malaysian patients that seek treatment are Muslims. Until recently, there are no specific reference for patient in understanding halal medication. Muslim academicians, health care and other professionals should produce an accessible halal references on medication for the public. This may help to increase awareness on halal pharmaceuticals among the public especially Muslims. Besides that, all pharmaceutical companies should adhere to Islamic guideline before applying for halal certification. This can possibly be achieved since it has been proven by Chemical Company of Malaysia (CCM) Berhad in which some of its health products have halal logos.

5. REFERENCE


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3D DATA ANALYSIS FOR FORENSIC DENTAL IDENTIFICATION

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Abstract

The necessity of personal identification has increased in recent years. Morphological assessment of teeth based on three-dimensional (3D) imaging techniques can provide rich and stable information for forensic identification. The aim of this study was to establish a standard methodology for utilizing morphological characteristics of teeth and dental arches for personal identification tasks.

Fifteen subjects (8 women, 7 men, average age: 30.0) participated. An intraoral impression of the maxilla was taken and a dental plaster cast was made for each subject. 3D scanning was carried out using the 3D laser scanner Vivid 910 (Konica Minolta Sensing, Inc., Japan) twice for each subject. Rapidform XOS/SCAN (INUS Technology, Inc., South Korea) software was used to trim and segment the obtained 3D data. Each 3D dataset was sectioned into 8 dental arch segments: full arch (A), partial arch from left to right second incisor (B), left to right canine (C), left to right first premolar (D), right central incisor to right last molar (E), left central incisor to left last molar (F), right second premolar to right last molar (G), and left second premolar to left last molar (H). For every pair of subjects, the corresponding dental arch segments were aligned in 3D space and the resulting Root Mean Square Errors (RMSE) were evaluated using MATLAB (The MathWorks, Inc., USA).

Through our experiments for all possible pairs of subjects, we observed clear differences between the RMSE distributions of genuine (intrapersonal) pairs and those for imposter (interpersonal) pairs. These results clearly indicate the significant potential of using 3D dental arch morphology to achieve highly accurate human identification. We also observed that the RMSE distribution varied significantly depending on the dental arch segment, which makes it possible to determine the most useful part of the dental arch for human identification.
Key words: 3D imaging, dental arch morphology, forensic odontology, person identification

Introduction

Verification of individual identity is an important procedure in medico-legal matters and is also important for the family who are missing their family member. Verification of individual identity is not only needed for the deceases, but it is also important to confirm living person’s identity. Identification of an individual can be confirmed by several methods. Teeth are one of the primary identifiers that are used during the identification process as well as DNA and fingerprints. Besides the primary identifiers, there are also secondary identifiers including personal descriptions, medical documents, and medical findings [1-3].

Today forensic odontology is considered to be a dependable and reliable method for victim identification. The adult dentition that typically consists of 32 teeth has various anatomical and restoration shapes, sizes, and wear patterns. Human dentition can survive very severe conditions, such as physical and chemical trauma, because the teeth are protected by the soft and hard tissue of the face and the oral cavity. Human dentition is the hardest tissue of the human body and can endure extreme conditions, including high temperatures up to 1600ºC. The usefulness of the teeth for DNA analysis has also been considered to be one of its advantages in human identification. DNA samples can be obtained from a dental pulp of the tooth specimen [4-7].

The use of the unique features of human dentition for identification is widely accepted within the forensic field. The most common methods used in forensic dental identification are dental charting comparisons, radiographic images, dental plaster cast models, and photographs. Visual identification is also one of the methods for dental identification that is commonly carried out by 2-dimensional (2D) imaging systems with some software applications such as Adobe Photoshp. In addition to 2D imaging systems, there are many studies that have use 3-dimensional (3D) imaging systems in forensic identification to achieve more accurate and precise results [8-10].

The use of 3D analysis in forensic identification has become a highlighted procedure when compared with the traditional methods. The 3D imaging approach in forensic identification offers documentation, analysis, and visualization of dental evidence with the minimum dimensional distortion. Based on the detailed representation of 3D images, the dental evidence can be visualized, interacted with, and analyzed on a computer screen. A number of studies have been developed to explore the usefulness of 3D imaging in the forensic field with various 3D imaging systems. In a previous study about bite-mark analysis by Evans, et al, 2011, they demonstrated that the 3D digitizer Vivid 910 was adequately recording the dental plaster casts [11-13].
There are many studies about 3D imaging systems in forensic odontology. Most of the previous studies have observed the usefulness, the accuracy, and the precision of 3D imaging systems in forensic odontology. Full dental arch comparisons were the most common methods used in studies of 3D imaging system in forensic odontology. However, there have been a few reports discussing the morphological standards of dental arches in forensic odontology.

The purpose of this study was to establish a standard methodology for utilizing morphological characteristics of teeth and dental arches for personal identification tasks.

Methodology

The subjects of this study were 15 persons (8 women and 7 men, average age 30.0 years old). An intra-oral impression was taken and a dental plaster cast was made for each subject. An intra-oral impression of the upper jaw/maxilla was taken using a dental impression tray and alginate powder Aroma Fine Mixer Type (GC Corp., Japan) following the manufacturer’s instructions. A dental plaster cast was made with dental gypsum type 1.

The non-contact 3D digitizer Vivid 910 (Konica Minolta Sensing, Inc., Japan) was used to acquire the 3D surface data of the dental plaster cast. Polygon Editing Tool (PET)
attached to Vivid 910 was used to align and merge multiple scanned data into a single polygonal model. The Rapidform XOS/SCAN software (INUS Technology, Inc., South Korea) was used to trim and segment the 3D data. [14].

The dental plaster cast was placed on the rotating table with the biting edges face up during the scanning process to simplify the 360° rotation of the dental plaster cast. Vivid 910 was positioned approximately 45° towards the dental plaster cast. This position allowed the 3D laser scanner to capture the whole dental plaster cast. Every dental plaster cast was scanned from 6 directions (an approximately 60° field could be captured in one-time scanning). At the same time, the transformation parameters, i.e., 3D rotation and translation, for the scanned data were obtained using PET to merge multiple scanned data into a single dataset. Dental plaster cast scanning was carried out twice in separate sessions for each cast.

All of the scanned 3D data were processed using the Rapidform XOS/SCAN software. The first step was to merge the 3D data acquired from different viewpoints to a single 3D dataset. Multiple raw 3D data for each person were
aligned according to the transformation parameters obtained by PET to build a single 3D dataset. Afterwards, the groups for comparing 3D data were made as follows: full arch (A), partial arch from left to right second incisor (B), left to right canine (C), left to right first premolar (D), right central incisor to right last molar (E), left central incisor to left last molar (F), right second premolar to right last molar (G), and left second premolar to left last molar (H). Figure 2 illustrates the included teeth in each comparison group. The purpose of the patterning of the 3D data was to determine the most useful section to establish the morphological standard of dental arch for identification.

The next step was to compare the 3D structure between the subjects by 3D data registration for every pair of 3D data following the midline of upper jaw as the guideline. Especially for the left and right posterior group, 3D data registration was based on the second premolar teeth position of the reference images.

The Iterative Closest Point (ICP) algorithm was used to calculate the Root Mean Square Errors (RMSE) between the 3D data. The RMSE can be described as the representation of the sample standard deviation of the differences between predicted value and observed value. The calculation of RMSE was carried out using MATLAB (The MathWorks, Inc., USA). The distribution patterns of RMSE were investigated by comparing the imposter (interpersonal) subjects and the genuine (intrapersonal) subject 3D data of each group.

The statistical analysis of this study was carried out using IBM SPSS Statistics version 23 (International Business Machines Corp., USA). The Mann-Whitney U test was used to analyze the significance of differences between genuine and imposter subjects. The statistical significance of this study was defined as p < 0.05.

Results
A summary of the descriptive analysis in this study is shown in Table 1. Table 1 shows the mean and SD value differences between imposter and genuine subjects in all comparison groups. Mean and SD values of imposter subject were significantly larger as compared with the values in genuine subjects.

<table>
<thead>
<tr>
<th>Group</th>
<th>Pair</th>
<th>RMSE (mm) mean</th>
<th>SD</th>
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<tr>
<td>A</td>
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<td>0.036</td>
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</tbody>
</table>

According to the Mann-Whitney U test results, there were significance differences between genuine and imposter subjects in all comparison groups, with p-values < 0.05. A distribution pattern of genuine and imposter subjects was also observed as shown in Figure 3. In group A, which consists of the full dental arch (16 teeth), it was clearly evident that the peak of the histogram was in the wide range for the imposter subject compared with the genuine subject. Compared with group A, the peak of the histogram of imposter subjects in groups C, D, E, and F had narrower limits compared with the genuine subject. These differences were also clearly shown in groups C, D, E, and F, which consisted of 6 to 8 teeth. The peak of the histogram in groups B, G, and H, which included 3 to 4 teeth, was closer between the genuine and the imposter subjects, and there were a few overlapping parts in the distribution.

Discussion
Forensic odontology, also known as dental forensics, is a branch of forensic medicine that deals with the management, examination, evaluation, and the presentation of dental evidence in criminal or civil proceedings. The subjects of forensic odontology can be divided roughly into 3 major fields of activity: civil or noncriminal, criminal, and research [15-17].

Identification is based on comparisons between known characteristics of a victim with the suspected individual. There are several established methods to confirm an individual identity. The Interpol DVI Guide classifies the human identifiers into primary and secondary identifiers. The primary identifiers are include DNA, fingerprint, and dental comparisons. Secondary identifiers include personal descriptions, medical documents, and medical findings from the victim. Secondary identifiers are used to complement primary identifiers in the identification process. In cases with limitations or an absence of primary identifiers, secondary identifiers in combination may provide sufficient information to establish the victim’s identity. It is therefore imperative that ante mortem data collection does not neglect the information to be gained from the secondary identifiers [1, 10].

Of vital importance in forensic dental identification is the accuracy and precision of the data. Accuracy is defined as the closeness of the measurement to actual known value. Precision is the ability of the device to reproduce the same results under the same conditions. High accuracy and precision of imaging in dental identification can be achieved by the use of 3D imaging techniques. There has been a lot of interest and development in 3D imaging for forensic identification. Evans, et al. (2010), performed experiments to describe the potential of 3D imaging in forensic odontology. In 2011, they simulated a bite-mark analysis with 3D imaging using Mavis stereo-photogrammetric and Vivid 910. The Mavis system has an error range of ± 1 mm. Another study by Naether, et al. (2012), explained the use of 3D optical scanning (GOM ATOS 3D) for documentation of bite-marks in foodstuffs and registered the dental plaster cast of the biter. In order to obtain sufficient scanning results, Developer U89 spray (Helling GmbH, Germany), MR 2000 Anti-reflex L aerosol spray (MR Chemie GmbH, Germany), Tevlin chalk spray (Technischer Vertrieb Ulrich Lippert, Germany), and alcohol mixed with Kronos titanium dioxide spray (Graphiti GmbH, Germany) had to be used to decrease the reflection of the object. A Vivid 910 3D digitizer was used in this study because of its accuracy and precision [8, 12, 18-20].
Figure 3 shows the distribution pattern of RMSE between genuine and imposter subject. The RMSE between imposter subjects showed significantly wider ranges compared to the genuine subjects. These results are consistent with a previous study about the usefulness of 3D imaging system in forensic odontology. The accuracy and precision of 3D imaging systems show they are reliable methods that can be used in forensic identification.
The most common methods used in studies about 3D dental identification use a full dental arch in the comparison. In the actual identification process, the morphological standard of the dental arch is needed to simplify the identification process. In this study, eight comparison groups (A–H group) were selected in accordance with the number of included teeth and teeth positions in the dental arch. The sectioning of the dental arch was introduced in our study to establish the morphological standard of dental arches for identification.

The distribution pattern of RMSE between the genuine and the imposter subjects was also influenced by the number of included teeth in the comparison group as shown in Figure 3. The differences between the genuine and the imposter subjects were clearly distinguished by the use of at least six teeth in the comparison. The peak of the histogram had a wider range in the imposter group if more teeth were included in the comparison. When fewer teeth were included in the comparison there was a narrower limit to the peak of the histogram. In addition, the involved side of the dental arch also affected the distribution pattern of RMSE. The use of both left and right dental arches (including the midline of the dental arch) were clearer when distinguishing the genuine and the imposter subjects, as compared with the use of one side (only the left or right) dental arch.

Figure 3 also shows that the number of included teeth in the comparison affected the distribution pattern of RMSE more than the position of the sectioned dental arch. This corresponds to group B (anterior dental arch) and group G and H (posterior dental arch).

In the actual identification process, the forensic team has a major challenge in establishing the victim’s identity correctly. In some cases, the intraoral condition of the victim may not be in good condition and the forensic dentist therefore cannot estimate the number of remaining teeth in the victim. We need to work on increasing the reliability of this method in future studies for an actual identification task.

**Conclusion**

Through our experiments for all possible pairs of subjects, we observed clear differences between the RMSE distributions of genuine pairs and those for imposter pairs. These results clearly indicate the significant potential of using 3D dental arch morphology to achieve highly accurate human identification. We also observed that the RMSE distribution varied significantly depending on the dental arch segment.

**Acknowledgement**

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References


Anxiety Nursing Treatment and Adolescents’ Self-esteem with Prodroma Early Psychosis in Orphanage

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Abstract

Prodroma early psychosis is the change that occurs in adolescents who at risk of anxiety and low self-esteem. This study aims to determine the effect of nurses nursing treatment towards prodroma early psychosis, anxiety and self-esteem of the adolescents in orphanages. The research design used quasi experimental pre-post test without control group with 77 adolescents as the sample selected by using purposive sampling technique with analysis test using ANNOVA Repeated Measure and T-tes. The results showed that nurses nursing treatment decreased the symptoms of prodroma early psychosis from 9.16 to 7.13. It means the score approached the prodroma early psychosis category limit. The anxiety also decreased significantly from 17.03 to 13.70 which means the anxiety remained in the minor category. Then, the adolescent self-esteem significantly increased from 45.97% to 63.77% which means increased by 17.8% (p value <0.05). Nurses nursing treatment are recommended for adolescents in the orphanage who have prodroma early psychosis with anxiety and low self-esteem nursing diagnosis.

Keywords: Adolescents orphanage, prodroma early psychosis, anxiety, self-esteem, nurses nursing treatment

INTRODUCTION

Every human being has problems in his life which can cause him to gain stress experience then lead to the changing in biology, psychology and socio-culture. The changes are common in adolescents. According to Stuart, Putri in Stuart, Keliat and Pasaribu (2016), adolescence undergoes biological, psychological and social changes that require adolescents to adapt since they encounter many challenges and conflicts, looking for self-identity, and likes to fantasize/excessive fantasy power. The existences of the demands that occur simultaneously because some adolescents are not able to adapt well, especially the condition of
adolescents who experience emotion change, unstable, easily stressed, depressed and feel helpless.

Adolescents who are unable to adjust towards stressors (stress causes) may encounter the changes of functioning in their life. This case appears as prodroma early psychosis symptoms such as sleep disorders, behavioral changes, flat affect, appetite impairment, unrealistic thinking, difficult to understand conversations, as well as the changes in their appearance. The early stage of prodroma psychosis, however, is still quite difficult to overcome due to the lack of public knowledge concerning the early detection of the client. In fact, sometimes symptoms that are not typical appear without any particular symptoms.

Data provided by *The World Health Organization* states that the problem of mental health disorders around the world has become a very serious problem in various countries. The world’s population is 10% at risk of mental disorders in the current time and 25% at risk of mental disorders at a particular time in their life (WHO, 2009). American Psychiatric Association (APA) data shows 100,000 adolescents and young adults of Americans experience first-episode psychosis (FEP) in each year (Heinssen, Goldstein, & Ph, 2014). It can be implied that the risk rate of mental disorders in the world is very high. Thus, early prevention and handling is needed to overcome the worse conditions. The result of Basic Health Research in 2013 shows the prevalence of people with mental emotional disorder in adolescence and young adult, is at the age of 15-24 years old which nationally reaches 5.6%. Based on the data which have been obtained, it can be concluded that both in the world and in Indonesia, none of any data concerning the prevalence of the adolescents in the phase of prodroma early psychosis. Yet, most clients come to health services have experienced psychotic and schizophrenia.

The stage of prodroma early psychosis may progress to psychotic early phases, marked by the onset of psychotic symptoms. The onset of this phase often occurs in adolescents and young adults, in this case the 15-25 years old range. Therefore, it is necessary to detect early in the beginning of the emergence of individual changes who encounter prodroma early psychosis symptoms over the previous age range.
The diagnosis that often arises in the phase of prodroma early psychosis of adolescents is anxiety (McGorry, 2008) and low self-esteem (Pruesner, 2011). The research result shows that children and adolescents in the orphanage are at risk of anxiety and low self-esteem compared to children and adolescents who live with complete parents. This case shows the importance of early detection in the prodroma early psychosis phase before the disease evolves to the psychotic phase. Many studies had been conducted in adolescences; however, none of them are prodroma early psychosis phase screening. Therefore, specifically, this current research done in the orphanages which have the different characteristic of the adolescents. Thus, it can be inferred that the research related to adolescents in the orphanage who have the phase of prodroma early psychosis is none in Indonesia.

**METHODS**

This research was started from descriptive research by using purposive sampling technique. It is aimed to investigate the number of adolescents in the orphanages who have prodroma early psychosis by using the PQ-16 instrument (Prodroma Question - 16) as well as who fulfill the inclusion criteria. Then, it was followed by quantitative research using quasi experimental pre post-test with control group by measuring the self-esteem of adolescents who experienced prodroma early psychosis used Rosenberg Self Esteem Scale instrument. In addition, the researcher provided the nursing treatment of the adolescents to observe the changes of prodroma early psychosis and the level of self-esteem.

The population was adolescents who live in the orphanages of Baubau city area, Southeast Sulawesi province, Indonesia. The sample was the adolescents who have prodroma early psychosis which had been screened first and fulfilled the criteria of inclusion. Number of adolescents who were screened as much as 125 adolescents of 4 orphanages with some inclusion criteria; 12-15 years old, able to read and write, able to communicate verbally well, experience the prodroma early psychosis phase with the PQ-16 = ≥ 6 score, live with caregivers in the orphanages and willing to be respondents. Therefore, it was gained 78 respondents.
During the research, there was one respondent who got sick and could not follow the further therapy. Thus, the total numbers of respondents was 77 adolescents.

The study was conducted in March 2017 - June 2017. The study was done in 4 orphanages of Baubau city, Southeast Sulawesi Province, Indonesia. Selection of research place was based on the several aspects. Firstly, the research area is far from mental health service. Secondly, the reason subjectivity of the researcher where the criteria of respondents in this study required some orphanages that could be reached by the researcher to fulfill the number of population and the corresponding sample.

Researcher guarantees the rights of adolescents who as the respondents by considering ethical research. This study received the ethical approval from the Research Ethics Committee of the Faculty of Nursing, Universitas Indonesia. The ethical requirements and the rights of the respondents have been fulfilled since the preparation of the research up to the publication. There are four basic principles of this research; Right to self-determination, Respect for anonymity and confidentiality, Right for fair treatment and Balancing harm and benefits.

RESULTS
The screening was completed by using the PQ-16 instrument (Prodroma Question-16). The number of adolescents who have prodroma early psychosis was 82 adolescents (65.6%). It indicates that the adolescent in the orphanage was at risk to experience the psychosis.

Characteristics of the adolescents who experienced prodroma early psychosis in the orphanage had an average age of 14 years old, length of stay in orphanage was for 3 years, experiencing a history of physical disease 40.26%, experiencing a history of unpleasant impression 74.03%, never get achieving 36.36%, male sex 57.14%, had been experiencing class remedial/too late in entering the school/dropout 32.47% and status in the family was with single parent or divorced parents 51.95%. However, generally, adolescents who lived with complete parents
had an inadequate economic condition, were wandering, etc. Therefore, it can be implied that almost all of them have low family functions. Some of these characteristics are the etiological factors of prodroma early psychosis and low self-esteem.

**DISCUSSION**

Prodroma early psychosis of the adolescents in the orphanages was found at the rate of 65.6%. It shows the prodroma early psychosis experienced by the adolescents was reared by more than half of the total adolescents who are screened. It can be inferred that the rate was relatively high and was very

---

**Table 1**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean Before</th>
<th>Mean TKN</th>
<th>Mean diff</th>
<th>SD</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prodroma EP</td>
<td>9.16</td>
<td>7.13</td>
<td>-2.03</td>
<td>1.86</td>
<td>0.00</td>
</tr>
<tr>
<td>Self-Esteem</td>
<td>13.79</td>
<td>19.13</td>
<td>5.34</td>
<td>4.14</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Based on Table 1, the average score of prodroma early psychosis of the adolescents in the orphanage before the ners nursing treatment was 9.16 which implied that it was more than half of total prodroma early psychosis symptom. Meanwhile, the average score of adolescents’ anxiety before the ners nursing treatment was 17.03. It means that it was in a minor category. The average score of adolescents’ self-esteem was 13.79 (45.97%). It means less than half of the total self-esteem could be achieved.

Furthermore, based on Table 1, it is known that the average prodroma early psychosis score decreased significantly from 9.16 to 7.13. It is inferred that the score approached the category limit of prodroma early psychosis after the ners nursing treatment, with $P \text{ Value} < 0.05$. The anxiety decreased significantly from 17.03 to 13.70 which means it remained in the minor category after was given by ners nursing treatment with $P \text{ Value} < 0.05$. Meanwhile, the change of adolescents’ self-esteem significantly increased from 13.79 (45.97%) to 19.13 (63.77%). In other words, self-esteem increased 17.8% after given the ners nursing treatment with $P <0.05$. Nevertheless, there was 36.23% of self-esteem score had not been reached by the adolescents.
necessary to be overcome. Based on the result, a strong assumption is that if the adolescents who experienced prodroma early psychosis do not handle with immediately, then it will have an impact on their selves either in the long-term or short-term period.

Morrison (2012) states that adolescents' treatment with prodroma early psychosis is very necessary and should be done immediately. It cannot be suspended since during the delay period, and it can be a bad impact for them, particularly if it continues to the early psychosis. The bad impacts that can occur in the adolescents are suicidal behavior, violence, disruption of role functions, and others.

A major implication based on this study is the impact which can occur due to the prodroma early psychosis on short-term period is low self-esteem. It is started by a variety of unpleasant problems experienced by adolescents and results the emergence of negative automatic thoughts from the problems of their life that are quite mild to very severe with various life backgrounds before entering the orphanage. Moreover, the adolescents who experience prodroma early psychosis will easily feel depressed, stress and depression. This situation, with the problem of more dominant low self-esteem, experienced by adolescents in the prodroma early psychosis will be at risk of emotional and behavioral disorders (Prasetyo, 2011). Other impacts that may arise is if the prodroma early psychosis management is delayed, it will develop to the adolescents’ self-injury behavior. In line with this study, the researcher found one of the adolescents with prodroma early psychosis who wanted to hurt himself.

Prodroma early psychosis of the adolescents in the orphanage after nurses nursing treatment significantly decreased on the prodroma early psychosis symptoms. It clearly shown in the decreased of an average score of prodroma early psychosis from 57.25% to 44.56% or it decreased 14.63%.

Anxiety is one of the most common nursing diagnose in the adolescents with prodroma early psychosis (McGorry, 2008). Based on this current study, the average score of adolescents’ anxiety who experienced prodroma early psychosis in the orphanage was in the minor category before given the therapy.
The results of this study do not cover the research that states the anxiety increases in the adolescents who experience prodroma early psychosis. In the social and demographic characteristics, the relationship between parental and familial characteristics towards anxiety is obtained the result that the prevalence of anxiety disorders was higher in the children and adolescents who live in their family with low levels of education, income and employment and family functions (Lawrence, 2015). Lawrence (2015) also reported that there are three out of four types of anxiety disorders have a higher prevalence in the single-parent or caregiver-type families than with complete parents. The results of this study are not in line with the previous research since the case can be caused by the environmental factors where the average length of stay in the orphanage around 3 years. Hence, the adolescents have adapted to the environment. According to Sulistyawati (2005), environmental factors, such as long-lived in a place, greatly affect the stress of someone who can cause anxiety, the longer a person lives in the place then the anxiety is in the less level. The researcher also found in this current study which is three of respondents who lived in the orphanage less than a year; 2 months - 6 months, the level of the anxiety were in the category of moderate to severe. In addition, the economic condition in the orphanage is quite stable. Thus, all the needs of adolescents can be fulfilled. Based on the situations, it can be concluded that anxiety of the adolescents in the orphanages are in the minor category that may be influenced by the environmental factors.

Based on this current study, the anxiety experienced by the adolescents decreased significantly from the minor category (17.03) to 13.70. It means the anxiety remained in the minor category after ners nursing treatment in the adolescents who experienced prodroma early psychosis in the orphanages. It can be inferred that ners nursing treatment can overcome the anxiety symptoms.

The results of this study are also accordance with the research conducted by Fiandiani (2010). She proposed that the relaxation of breath effectively able to reduce the anxiety. Another study of five-finger hypnotic therapy had been proved to decrease the anxiety in hypertensive clients (Banon & Dalami, 2014), and decrease the anxiety in students who are preparing a thesis (Hastuti & Arumsari, 2016). In addition, ners nursing treatment research also proved to overcome the
anxiety in clients with physical illness and improve the ability of their family (Livan, Keliat & Putri, 2013). Nursing treatment that can be done by nurses in overcoming the anxiety according to Keliat (2015) is to discuss the anxiety, causes, occurrences, signs and symptoms and the result of anxiety, trained physical relaxation, distraction techniques, finger hypnosis and spiritual way.

Based on the explanation above, it can be concluded that ners nursing treatment can reduce the anxiety of the adolescents who experience prodroma early psychosis in the orphanages.

Moreover, the self-esteem of the adolescents in the orphanages before the nursing treatment gained the average self-esteem score as much as 45.97%. It indicates the figure is still below the half of the level of one's self-esteem. The research conducted by Farooqi and Intezar (2009) is obtained that there was a significant difference between orphans and children who live with their parents. The orphans have lower self-esteem than the children who live with both of their parents. The findings have implications for understanding the emotional state of the mind and the personal development of children who live in orphanages compared with those who live with complete parents.

Based on this study, after the ners nursing treatment of the adolescents who experienced prodroma early psychosis in the orphanage, their self-esteem was significantly increased from 45.97% to 68.47%. It can be concluded that ners nursing treatment can increase the adolescents’ self-esteem. It is in accordance with the research conducted by Kristyaningsih, Keliat and Helena (2009). They assumed that giving ners nursing treatment is able to increase the client's self-esteem with kidney failure and the client's self-esteem is more increased by given the specialist ners treatment.

In this study, the low self-esteem treatments are the ability of identification and positive aspects that are still owned by the adolescents, help the adolescents in assessing their ability and discuss the ability that can still be used today, help the adolescents to choose and determine their ability to be trained as well as practiced the abilities that have been selected. These treatments can increase the
adolescents’ awareness of the positive aspects that are still owned. As the result, it can increase the adolescent's self-esteem.

CONCLUSION

This study shows that the average age of adolescents who have prodroma early psychosis are nearly 14 years (13.69 years), and the adolescents who have prodroma early psychosis have the average length of stay in the orphanage is almost 3 years (2.98 years).

In regard with a history of adolescent physical illness, more than half of the total numbers of adolescents do not have the history of physical pain and the rest have head trauma and fever. The history of unpleasant experiences is mostly experienced by the adolescents at least one of the experiences of loss, rejection and physical/mental violence. Furthermore, in terms of characteristics of school achievement, it is obtained the data that more than half of adolescents have gained the achievement in their school and in the environment. The results of the analysis showed that the orphanage adolescents involved in this study were mostly male.

Moreover, based on the characteristics of school experience, the data that had been obtained showed more than half of adolescents who experienced prodroma early psychosis in the orphanage are there is no history of late / drop out / stay class before or until today. Meanwhile, the adolescents who experienced the delay / previous school dropouts, currently some the adolescents are on the class and level of education as well as are below their age in general. Besides, the characteristics of status in their family are mostly adolescents still have both parents, but they were sent to the orphanages due to economic circumstances, parents wander out of town and abroad with the aims to grow the children independently.

Based on the results, it can be inferred that the results of the adolescent surveys who experienced prodroma early psychosis in the orphanages found more than half of the number of adolescents who are screened. Thus, they need attention and further treatment for the prevention of psychotic. The prodroma early psychotic of
the adolescents in the orphanage before the intervention is at an average score of half of the total score. It clearly indicated the severity of symptoms that had been perceived.

The anxiety of the adolescents who have experienced the prodroma early psychosis in the orphanages before the intervention is in the minor category, while the adolescents’ self-esteem is on the average score less than half of the total self-esteem score.

Ners nursing treatment reduced the symptoms of prodroma early psychosis and the anxiety as well as significantly increased the self-esteem of the adolescents in the orphanages.

Based on the results, it is hoped that the community nursing services can apply ners nursing treatment in the orphanage, collaborate with the nurse in the mental health service (Diploma and Ners Nurses) through cooperation with the UKS, and can refer to the mental specialist nurse if it needs for the further treatment.

Ners nursing treatment can be used for the adolescents in the orphanages to decrease the prodroma early psychosis symptoms, decrease the anxiety and increase the adolescents’ self-esteem that come with various problems in their lives. In addition, ners nursing treatment can be taught to the caregivers in the orphanages in teaching and monitoring the adolescents who have prodroma early psychosis, anxiety and low self-esteem.

A longitudinal study is needed to be conducted in every 6 months to the adolescents with prodroma early psychosis by monitoring predisposing precipitation factors of prodroma early psychosis. As the result, it can reduce the symptoms of prodroma early psychosis which affects the decrease in the anxiety and increase the adolescents’ self-esteem sustainably.

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RELATIONSHIP CONTRACTION INTENSITY WITH ACCELERATION LABOR IN MOTHERS INPARTU IN HOSPITAL AM.PARIKESIT TENGGARONG DISTRICT KUTAI KARTANEGERA IN 2012

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ABSTRACT

The high number of maternal and infant deaths in Indonesia is one of the causes of labor that is not fluent and leads to complications in labor and causes maternal and neonatal deaths. The fluency of the birth process Influenced by contraction factor which is a very important factor in the process of labor because it is a force that helps the mother in a normal delivery. Problems in contraction can cause prolonged labor, parturition jammed, and sectio caesaria. The purpose of this study to determine the relationship with the smooth intensity of the process of labor. This research is analytic descriptive with cross sectional research design. This research was conducted in RS AM Parikesit Tenggarong. Research population all inpartu mother who gave birth at RS Parikesit Tenggarong. Sampling was done by accidental sampling technique by 93 respondents. Technique of collecting data using observation, analysis technique using univariate analysis with frequency distribution and bivariate analysis with statistical test of Chi Square ($\chi^2$) at significant level $\alpha$ 0.05. The result of this research is 59.1% inpartu mother has strong intensity, as much as 63.4% mother inpartu process of delivery smoothly and there is a relationship between the intensity of his with the smooth process of labor with p value 0.000. Conclusion there is a relationship between the intensity of his with the smooth process of labor. Suggestion RSUD AM Parikesit make extension program and open pregnancy gym class, midwives provide counseling and guidance on pregnant women to perform ANC examinations and follow pregnancy exercises and refer mothers who have problems with the delivery process for faster and more precise handling, pregnant women seek information about the delivery process. Keyword: Intensity of contraction: smooth delivery process.
1. INTRODUCTION

The Constitution World Health Organization (WHO) in 1948 mentions that health is a fundamental human right that contains an obligation to nourish the sick and maintain a healthy one. The fulfillment of the right to the health of the citizens will be seen from the level of health that one of the efforts to achieve by providing basic health services, because everyone has the right to live prosperous, getting a good and healthy environment and entitled to health services to increase level of health (Azwar, 2005).

Indicators of increasing health status include decreasing maternal and neonatal mortality. One effort to reduce maternal and neonatal mortality by providing quality maternal and neonatal health services and close to the community. The Government launched the Making Pregnancy Safer (MPS) which basically emphasizes the provision of good maternal and neonatal health services during pregnancy and childbirth (Saifuddin, 2002).

The smoothness of labor depends on 3 factors are mother power (power), the state of the birth path (passage) and the state of the fetus (passanger). Another factor is the psychological mother and helper at delivery. Given the balance or suitability between these factors, normal labor is expected to take place. If there is interruption in the course of labor such as disturbances in his abnormalities can inhibit the smooth process of labor. Uncomplicated labor may result in complications in labor and cause infant and maternal death (Manuaba, 2003).

The smoothness of the birth process is influenced by contraction factor which is a very important factor in the process of labor, abnormal contraction both the strength and the nature can inhibit the smooth process of delivery (Wiknjosastro, 2006). This is confirmed by Mansjoer (2003) states that contraction factor is a major factor and is very influential on the smoothness of labor because contraction is a pushing force that helps mothers give birth normally. Labor with normal conditions may become abnormal if mother contraction is weak.

Contraction of the uterus regularly because the smooth muscles of the uterus that work
properly and perfectly will gradually push the fetus through the cervix and vagina so that the fetus out of the mother's womb. Contraction causes the cervix to open gradually (dilated), thinning and attracted until it almost blends into the uterus. This change allows the fetus to be born. perfect contraction can help smooth labor but if contraction imperfect it can cause problems (Manuaba, 2003).

2. METHODS

This research is a quantitative research with descriptive analytic method. The research design used is cross sectional, the cause and effect variables that occur are measured or collected in the same time. The AM population in this study were all mothers of maternity in Parikesit Tenggarong Hospital. The sampling technique uses accidental sampling where the determination of the number of samples is determined based on the number of deliveries at the time of the study. As an estimate data, the data of the number of deliveries from January to June 2012 were 1,241 deliveries and the number of samples taken at the time of the study was 93 mothers. This research was conducted at Hospital AM Parikesit Tenggarong, Kutai Kartanegara in October 2012. Technique of collecting data using observation that is doing direct observation to measure intensity of contraction and acceleration of delivery. To measure the intensity of contraction and the smoothness of the birth process using a checklist and partograf sheet. Data Processing Techniques with Editing, Coding, Sorting, Entry and Cleaning and data Analysis techniques with Univariate analysis in the form of frequency distribution and Bivariate Analysis using Chi Square formula (X2).

3. RESULTS AND DISCUSSION

Based on the respondent's data, it can be seen that the respondent's characteristic by age was obtained that from 93 respondents, 22 respondents (23,7%) were <20 years old, 44 people (47,3%) were between 20-35 years old and 27 people (29%) are aged> 35 years.

Table 3.1
Frequency Distribution Respondents Based on Age Characteristics In Mother Inpartu at AM Hospital, Parikesit Tenggarong Kutai Kartanegara in 2012

<table>
<thead>
<tr>
<th>No.</th>
<th>Age Characteristics</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>&lt; 20 years old</td>
<td>22</td>
<td>23,7</td>
</tr>
<tr>
<td>2.</td>
<td>20-35 years old</td>
<td>44</td>
<td>47,3</td>
</tr>
<tr>
<td>3.</td>
<td>&gt; 35 years old</td>
<td>27</td>
<td>29,0</td>
</tr>
</tbody>
</table>
Based on the characteristics of respondents on the basis of parity, 28 respondents (30.1%) had primiparity, 46 people (49.5%) had multiparity and 19 people (20.4%) had grandemulti parity.

**Table 3.2**

**Frequency Distribution of Respondents Based on the Parity Characteristics of Mothers Inpartu at AM Hospital, Parikesit Tenggarong Kutai Kartanegara in 2012**

<table>
<thead>
<tr>
<th>No.</th>
<th>Parity</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Primiparity</td>
<td>28</td>
<td>30.1</td>
</tr>
<tr>
<td>2.</td>
<td>Multiparity</td>
<td>46</td>
<td>49.5</td>
</tr>
<tr>
<td>3.</td>
<td>Grandemulti parity</td>
<td>19</td>
<td>20.4</td>
</tr>
<tr>
<td></td>
<td><strong>Amount</strong></td>
<td><strong>93</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Based on univariate analysis, 55 people (59.1%) had strong contraction and 38 people (40.9%) had weak contraction.

**Table 3.3.**

**Frequency Distribution of Respondents Based on contraction Intensity In Mother Inpartu at AM Hospital, Parikesit Tenggarong Kutai Kartanegara in 2012**

<table>
<thead>
<tr>
<th>No.</th>
<th>Contraction intensity</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Strong</td>
<td>55</td>
<td>59.1</td>
</tr>
<tr>
<td>2.</td>
<td>Weak</td>
<td>38</td>
<td>40.9</td>
</tr>
<tr>
<td></td>
<td><strong>Amount</strong></td>
<td><strong>93</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Based on research data showed that many experienced maternal mother with contraction <3 times in 10 minutes and duration <20 seconds. The research data explains that there are still mothers who have contraction weakness so that inhibits the smooth process of labor, Martothesodo and Sumampouw (2007) explains that the problem that is often encountered regarding his mother is deformity contraction. aberration contraction or energy abnormality is one of factors that causes difficult labor or dystocia. abnormal contraction
in strength or nature causes the usual birth in every birth, and if it can not be overcome, then labor will bottlenecks or congestion.

The results of this study explain that the problem of intensity of contraction at RSU AM Parikesit quite a lot and impact on the smooth process of labor such as research conducted by Lusia (2009) in RS Cipto Mangunkusumo Jakarta which found as many as 57% of maternity mothers have problems of intensity of contractions. According to the researchers the number of mothers who have problems of intensity due to the lack of there is another factor that is the age of mothers where the mother with high risk age with age> 35 years, this is causing mother contraction also decreased in addition to lack of understanding of the mother a good labor process and preparation before delivery, especially contraction preparation during labor also affect.

This lack of knowledge is due to the fact that the mother has never attended pregnancy exercises that can help the mother prepare for the delivery as suggested by Agustina (2009) which explains that pregnancy exercise is very good done by the mother before the delivery because in pregnancy exercise mother is given knowledge about labor process and prepare yourself physically and mentally to deal with labor so that the delivery process becomes smooth.

For variable smoothness of delivery process. Based on the observation that has been done and by seeing the partograf as much as 59 people (63,4%) the delivery process is smooth and 34 people (36,6%) the process of delivery is not smoothly.

### Table 3.4.

**Frequency Distribution of Respondents Based on Smoothness of Birth Process In Mother Inpartu at AM Hospital. Parikesit Tenggarong Kutai Kartanegara in 2012**

<table>
<thead>
<tr>
<th>No.</th>
<th>Delivery Process</th>
<th>Frequency (n)</th>
<th>Percentage(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Smooth</td>
<td>59</td>
<td>63,4</td>
</tr>
<tr>
<td>2.</td>
<td>Not smoothly</td>
<td>34</td>
<td>36,6</td>
</tr>
<tr>
<td></td>
<td>Amount</td>
<td>93</td>
<td>100</td>
</tr>
</tbody>
</table>
Manuaba (2003) explains that labor is a process of expending the conception (fetus and placenta) that has been sufficient for months and can live outside the womb through the birth canal or through other paths with help or without assistance (own strength).

The research is in harmony with the research conducted by Mulyani (2009) with the results of his research indicates that the problem of the smoothness of the process childbirth is now a problem that is often faced by the mother at the time of delivery and in Fatmawati Hospital found 41% of deliveries indicated not smooth due to various causes.

According to the researcher, there is still a maternal mother whose delivery process is not smooth due to the lack of preparation of the mother before delivery especially the primigravida mother who has not experience and the lack of information about the delivery process so this causes the mother to have problems in the delivery process. This is stated by Lukman (2009) which states that the readiness of the mother facing childbirth requires knowledge so that the mother has a mental readiness before delivery. With good knowledge about the signs of pregnancy danger, signs and symptoms of labor and preparation required before delivery makes the mother better prepared face her delivery.

Bivariate analysis was done to find out the relation of intensity of contraction with the smooth process of labor using chi square formula ($\chi^2$). from 55 respondents who have strong intensity, as many as 47 people (85.5%) the process of persalinanya smoothly and 8 people (14.5%) the process of delivery is not smoothly, while from 38 respondents who have weak intensity, as many as 12 people (31.6%) the delivery process smoothly and 26 people (68.4%) the delivery process is not smooth. Analysis of the relationship between the intensity of contraction with the smooth process of labor done using Chi Square formula obtained there is a significant relationship (meaningful) between the intensity of his with the smooth process of delivery in the mother inpartu. The OR (Odds Ratio) analysis shows the value of 12,729 which means that the mother with strong contraction is 12,729 times more likely to have a smooth delivery process compared to the mother who has weak contraction intensity. The value of KK (Contingency coefficient) of 0.482 while the maximum value of C = 0.707 so it can be said that the closeness of relationships that occur strong enough because the value of KK close to the maximum C value

Table 3.5
Crosstab relationship contraction Intensity with Smooth Birth Process In Mother Inpartu at AM Hospital. Parikesit Tenggarong Kutai Kartanegara in 2012

<table>
<thead>
<tr>
<th>Contract Intensity</th>
<th>Delivery Process</th>
<th>Amount</th>
<th>X2 count</th>
<th>P</th>
<th>OR</th>
<th>KK</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Smooth</td>
<td>Not Smoothly</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Strong</td>
<td>47</td>
<td>85.5</td>
<td>8</td>
<td>14.5</td>
<td>55</td>
<td>100</td>
</tr>
<tr>
<td>Weak</td>
<td>12</td>
<td>31.6</td>
<td>26</td>
<td>68.4</td>
<td>38</td>
<td>100</td>
</tr>
<tr>
<td>Amount</td>
<td>59</td>
<td>63.4</td>
<td>34</td>
<td>36.6</td>
<td>93</td>
<td>100</td>
</tr>
</tbody>
</table>

This research proves the theory forward by Winkjosastro (2006) which states that the smoothness of the birth process is influenced by contraction factor which is a very important factor in the process of labor, abnormal contraction both the strength and the nature can inhibit the smooth process of labor. This is confirmed by Mansjoer (2003) states that contraction factor is a major factor and is very influential on the smoothness of labor because his is a pushing force that helps mothers give birth normally. Labor with normal conditions may become abnormal if mother contraction is weak.

Contraction is very important in facilitating the delivery process because the intensity of contraction is part of the power. The power factor or the power that drives the fetus out is a very important factor in the process of labor, abnormal contraction neither the strength nor the nature of the data inhibits the smoothness of labor. Manuaba (2003) explains contraction is a series of regular uterine contractions because the smooth, well-worked uterus muscles gradually push the fetus through the cervix and vagina so that the fetus gets out of the mother's womb. Contraction causes the cervix to open gradually (dilated), thinning and attracted until it almost blends into the uterus. This change allows the fetus to be born.

Based on the results of the research it is clear that the intensity of his influence on the smooth process of labor but research data found there are 8 people with strong intensity but the process of delivery is not smooth as well as there are mothers with weak intensity but the delivery is smooth, this is because of factors other factors his that also affect the smoothness of the process of delivery of factor passenger, passage, psychic and helper.

4. CONCLUSION

Characteristics of Mother's age at Hospital AM.Parikesit Tenggarong Kutai
Kartanegara as many as 47.3% aged between 20-35 years and 49.5% have multiparity. Intensity of mother contraction in AM Hospital. Parikesit Tenggarong of Kutai Kartanegara is mostly strong that is 59.1%. The process of delivery to the mother inpartu at AM Hospital. Parikesit Tenggarong Kutai Kartanegara mostly smoothly that is 63.4%. There is a significant relationship between the intensity of his with the smooth process of delivery to the mother inpartu in AM Hospital. Parikesit Tenggarong Kabupaten Kutai Kartanegara with p value 0.000.

5. SUGGESTION

Practically the Hospital can make program of giving information to pregnant mother about the problems related to fluency of delivery process and opening pregnancy gym class that can help smooth process of delivery. Midwives can provide counseling and guidance to pregnant women who perform ANC examination to follow pregnancy gymnastics and prepare themselves physically or mentally before delivery so that the mother is ready at the time of delivery, especially his problems. In addition, referring to mothers who have problems that can disrupt the smooth process of delivery to the hospital for handling more quickly and precisely.

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A SUPPLY CHAIN PROFILE OF SCHOOL-BASED FEEDING PROGRAMS IN THE PHILIPPINES

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ABSTRACT

The prevalence of wasting and underweight children between the ages of 5 and 10 is still a major concern in the Philippines. In response to this, several school-based feeding programs have been initiated in the Philippines by the Department of Education, and non-governmental organizations such as the Ateneo Center for Educational Development’s Blueplate for Better Learning and Gawad Kalinga’s Kusina ng Kalinga (KnK).

This study aims to provide a supply chain profile of the central kitchen approach used in implementing the Blueplate for Better Learning and Kusina ng Kalinga using the school feeding supply chain framework developed by Kretschmer, Sprinler, and Wassenhove (2014). The research looks into the crucial internal and external factors that influence the attainment of program objectives, affect its performance, and promote its overall sustainability. This study is part of an on-going comprehensive impact and process evaluations of ACED Blueplate and GK KnK.

Keywords: Humanitarian supply chain; Hunger alleviation; School feeding program; Sustainability; Social protection

1. INTRODUCTION

Hunger and malnutrition are significant deterrents to school performance of school-age children. Absenteeism due to hunger is one of the associated factors in poor performance of children in the Philippines. Children who suffer from poor nutrition perform less well in school and will be more likely to drop out of school. Many studies have demonstrated that there is a clear connection between nutrition and school performance and achievement.

In 1989, of the Filipino children under five 27.3% of them are underweight, while 44.5% and 6.2% are stunted and wasted. By 2005, we only managed to reduce the same to 20%, 32.9%, and 5.8% respectively. In 2013, the Food and Nutrition Research Institute (FNRI) has reported increases in the prevalence of underweight children under five to 21.5%, stunting to 33.4%, and wasting to 7.1%.¹

The prevalence of wasting and underweight children between the ages of 5 and 10 is still a major concern in the Philippines. In the last available national statistics in 2014, the figures remain significant, and higher by as much as 6% compared with that of the world average for the same period. About 29% of children from 5 to 10 years old are still classified underweight, and 9% are categorized as wasted. This dire situation highlights the urgency to provide effective programs on hunger alleviation and health, as well as, the examination of its interrelationship with basic education performance of these disadvantaged children. In response to this, several school-based feeding programs have been initiated in the Philippines by the Department of Education, and non-governmental organizations such as the Ateneo Center for Educational Development’s Blueplate for Better Learning and Gawad Kalinga’s Kusina ng Kalinga (KnK). These programs primarily aim to improve the nutritional status of children classified as severely wasted and wasted, improve their classroom attendance, and alleviate short-term hunger in selected public schools in the Philippines.

This study aims to provide a supply chain profile of the central kitchen approach used in implementing the ACED Blueplate for Better Learning and GK Kusina ng Kalinga using the school feeding supply chain framework developed by Kretschmer, Sprinler, and Wassenhove (2014). The research will look into the crucial internal and external factors that influence the attainment of program objectives, affect its performance, and promote its overall sustainability. In the process, the study will be able to identify relevant supply chain issues affecting the timely delivery and distribution of cooked and nutritious meals to the targeted children. This study is part of an ongoing comprehensive impact and process evaluations of ACED Blueplate and GK KnK.

2. LOCAL RESPONSE: SCHOOL-BASED FEEDING PROGRAMS, ACED BLUEPLATE AND GK KUSINA NG KALINGA

In response to the urgent need for hunger alleviation, health, and education in the Philippines, the Department of Education (DepEd) has been implementing the School-Based Feeding Program (SBFP) since 1997. The SBFP aims to improve student beneficiaries’ nutrition status from severely wasted or wasted to normal, improve classroom attendance, and alleviate short-term hunger.

From 2011 to 2013, the SBFP was only able to feed around 40,000 students according to the DepEd Director for Health and Nutrition Center, Ms. Ella Naliponguit. However, this is just 2% of the two million malnourished students in 2011 alone (The Manila Standard, 2014), rendering the impact of the program negligible on a national scale. Since national budget constraints largely limit the program’s coverage, DepEd has started working with local government units, non-government organizations, and other partners from the private sector to widen SBFP implementation.

Heeding DepEd’s call for support in feeding more malnourished school children, the Ateneo Professional Schools (APS) launched the Blueplate for Better
Learning Program on February 2011, implemented through the Ateneo Center for Educational Development (ACED)\(^2\). The ACED Blueplate is a feeding program that targets undernourished elementary public school children in Metro Manila. Since the program’s inception, 59,553 school children have been fed. In the process, ACED was able to develop what we refer to as the ACED Blueplate Central Kitchen Approach. It is a template for large-scale kitchen operations with fixed menu cycle, volunteer management system, dispatch and delivery system of meals to beneficiary schools from the central kitchen, and monitoring and evaluation tools. The ACED Blueplate Central Kitchen was first implemented in Bagong Silangan Elementary School in Quezon City to feed 400 students in 2010. Then, a year later, an ACED Blueplate Central Kitchen was established in Manuel L. Quezon Elementary School, which catered 4,000 student beneficiaries from its host school and three other schools in the city.

The ACED Blueplate Central Kitchen Approach notably employs an inter-sector collaboration approach as it is privately designed by ACED of the Ateneo de Manila University and implemented by LGUs in coordination with their public schools. In some sites like Valenzuela City, the feeding initiative is partially financed by the government with DepEd as the proponent providing the intended budget allocation.

Another effort to address malnutrition among the youth in the country, which also uses the ACED Blueplate Central Kitchen Approach, is the Kusina ng Kalinga (KnK) program of Gawad Kalinga\(^3\). KnK is Gawad Kalinga’s anti-poverty campaign to end hunger among Filipino children. Besides providing daily nutritious lunch meals to students in public schools, KnK also provides food for children in conflict- and disaster-ridden areas with the aid of volunteers and donors. From 2015 to 2016, KnK has served lunch for a daily average of 18,252 kids.

Aside from forging partnerships with the private sector and LGUs, KnK also aims to impact the local economy by directly engaging the farmers and small and medium-sized enterprises (SMEs) in their beneficiaries’ communities. KnK also provides assistance to farmers through the Social Entrepreneurship Program (SEP) of LifeBank Foundation, a non-profit institution which provides microfinance and social services.

\(^2\) Based on the Ateneo de Manila University website, the mission statement of ACED is as follows: “The Ateneo Center for Educational Development (ACED) spearheads the University’s mission to close the poverty gap and improve quality of life through improving public basic education in scale. It aims to move up the performance of clusters of public schools through initiatives that are needs-based, community-owned, and outcomes-based, by engaging various units of the Ateneo de Manila, the school communities, DepEd at the national and local levels, and local government. It facilitates partnerships with individuals and institutions to marshal human and material resources to support its mission.”

\(^3\) Per its website, “Gawad Kalinga Community Development Foundation, Inc. (GK) is a Philippine-based movement that aims to end poverty for 5 million families, by first restoring the dignity of the poor.”
Aside from complementing the DepEd’s SBFP, the ACED’s Blueplate and GK’s KnK are also template-building initiatives that seek to develop a sustainable, replicable, and cost-effective model of school feeding programs. This model can be presented to national agencies (especially DepEd), policymakers, local government units, and other stakeholders for widespread implementation.

3. SUPPLY CHAIN FRAMEWORK

The need to address micronutrient deficiency and severe malnutrition as early as possible has made school-based feeding programs a natural and popular solution for NGOs and governments in developing countries. However, due to the existence of unclear (or even competing) performance indicators, the intricacies of public-private interactions, and the presence of (monetary) operating and social costs, determining the effectiveness of this programs can be difficult. Thus, a reliable assessment of program effectiveness would have to take into consideration these factors.

In addition to the usual metrics for measuring program success, another key factor is sustainability. Similar to other humanitarian operations, feeding programs are ideally viewed as a temporary intervention mechanism, especially with respect to external funding and administration. Sustainability, in this context, refers to program continuity, where programs are transitioned to and run effectively by local entities and have little to no reliance on external funding and expertise. (Gruen et al., 2008; Scheirer, 2005) The World Bank and WFP highlight programs that utilize local resources and capacity and encourage community participation. (Bundy et al., 2009)

From an operations management perspective, feeding programs can be viewed as supply chains. To study the Blue Plate and KnK models, we utilize the supply chain framework by Kretschmer et al. (Kretschmer, Spinler, & Van Wassenhove, 2014) and analyse external and internal factors of the program design vis-à-vis the program objectives and performance measures. External factors include all entity groups in the program, namely: suppliers, aid providers, beneficiaries, and third parties, along with the operating conditions of the program (i.e. political climate, accessibility, etc.). Internal factors refer to the supply chain strategies, capabilities, and processes. These are then evaluated with respect to the various objectives (operational, strategic, and social) via the use of different performance measures. Using this analysis, we can identify areas of success and improvement for both models, and provide suggestions to work towards achieving program sustainability.

4. ANALYSIS OF THE ACED BLUEPLATE CENTRAL KITCHEN APPROACH USING THE SUPPLY CHAIN FRAMEWORK
The ACED Blueplate Central Kitchen Approach is used by both ACED Blueplate for Better Learning Feeding Program and GK Kusina ng Kalinga feeding programs. In the following, we analyze using the Supply Chain Framework an implementation of the ACED Blueplate Central Kitchen Approach in the city-wide feeding program of the City of Valenzuela. This is one of the most interesting implementations so far of the central kitchen approach because it has been feeding more than 15,000 students daily since 2012.

External Factors

In school year 2011-12, the nutritional status result of the city showed that out of 68,890 students in the public elementary schools in the Valenzuela City more or less 13,000 of them are undernourished. This is the external environment that prompted the Valenzuela City local government to launch the school-based feeding program to feed all undernourished students (with wasted or severely wasted BMI) in all of its 39 public elementary schools in June 2012. The program dubbed as “K to 6 Feeding Program” is on its sixth year of implementation this year. The program is managed by ACED Blueplate Valenzuela, as a third party, using a central kitchen approach—that is, the food is prepared in one kitchen and then the packed meals are delivered to the schools of the beneficiaries. On the second year of the operations, the Valenzuela LGU requested ACED to also prepare the food for the feeding program of the city’s 78 daycare centers in the ACED Blueplate Central Kitchen. Hence, from feeding 5,265 students (K-6 only) on its first year, the kitchen ramped up its production to feed 16,667 students (8,542 K-6 and 8,125 Daycare) daily.

Initially, the program was funded wholly by the Valenzuela LGU, but by second year they were able to assess the funds for the School-based Feeding Program (SBFP) of the Department of Education (DepEd) for the food budget of the undernourished K-6 students. Meanwhile, the food for the feeding program for the daycare students is funded by the Department of Social Welfare and Development (DSWD). The Valenzuela LGU takes care of the other aspects of the feeding program like the salary and honorarium of central kitchen personnel and the incentives for the kitchen volunteers.

As a highly urbanized city, logistics and suppliers for basic food commodities are not problematic. However, they cannot get secure supplies from smallholders because the payment from DepEd and DSWD is usually delayed. This is probably the reason why the three suppliers for the whole operation over the years has remained unchanged.

Internal Factors

Supply Chain Strategy

The priorities of the feeding program have been determined by the Department of
Education. The main target of the program are the wasted or severely wasted students in the public schools of the country. The targeting is done annually. At the start of each school year, the BMI of the students are computed and classified. The list of severely wasted and wasted are then submitted to the DepEd offices together with the request of funding for 120-day feeding program. The modality consists of in-school lunch. As for the operational model of the program, the procurement is centralized and insourced since there is yearly bidding. The program management is also centralized but done by a personnel of ACED, a third party, who implements the ACED Blueplate Central Kitchen Approach as the Project Coordinator.

Supply Chain Capabilities and Processes

The bidding is handled by the Bids and Awards Committee of the Valenzuela LGU. The prices are fixed throughout the year (grocery price). Overall, procurement procedures and management of suppliers are handled by a personnel of the Purchasing Department of Valenzuela LGU, while the preparation of purchase order is done by ACED personnel every two weeks. There is no issue about warehousing nor storage because the meat is delivered on the day of use, while the vegetable and fish are delivered a day before of use.

HR

The ACED Blueplate Kitchen in Valenzuela is currently run by 37 personnel from Valenzuela LGU under the overall supervision of the Project Coordinator from ACED, who ensures proper and smooth execution of the central kitchen approach.

An integral part of the HR in the central kitchen of Valenzuela are the kitchen volunteers. They prepare the ingredients and pack the cooked meals. Last school year, a total of 898 volunteers registered at the beginning of the school year, and 628 of them (about 79%) remained active until the end of the feeding cycle in March 2017. In fact, a total of 189 of volunteers are set to receive special commendations for being continuously active in the program for the last five years. Because the central kitchen feed more than 15,000 students daily, a minimum of 50 volunteers are needed for the entire operation. Hence, lack of volunteers which happens a few times is a concern. The volunteer management in the important aspect of the operations, which is handled by the Kitchen Manager for Administration. While the volunteers are not paid, they get free meals during their shift and special gifts during special occasions.

The actual feeding of the beneficiaries is done in their respective schools, and this
was previously facilitated by some assigned full-time teachers from each school. But starting last school year, feeding coordinators were hired for each school to oversee the feeding operations and to have better control on the feeding operations in school. The feeding coordinators, under the supervision of the DepEd Valenzuela Division Medical Officer, make and collate the necessary reports for monitoring of the grades, attendance and nutritional status of the beneficiaries twice a year: midyear and yearend. These reports are given in the table below.

<table>
<thead>
<tr>
<th>Required by DepEd</th>
<th>Require by ACED</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nutritional Status Record</strong></td>
<td><strong>Report 1: BMI Status Report</strong></td>
</tr>
<tr>
<td>SBFP Form 1: Masterlist of Beneficiaries for SBFP</td>
<td>Report 1A: List of Students Who Needs Further Medical Monitoring and Support</td>
</tr>
<tr>
<td>SBFP Form 2: SBFP List of Schools</td>
<td>Report 2: Beneficiaries Grades, Achievements, Awards, Honors and Recognitions</td>
</tr>
<tr>
<td>SBFP Form 3: SBFP Summary of Beneficiaries &amp; Start of Feeding</td>
<td>Report 3: BMI Improvement and Academic Performance Improvement Correlation</td>
</tr>
<tr>
<td>SBFP Form 4: SBFP Records of Daily Feeding (Feeding Attendance of Beneficiaries)</td>
<td>Report 4: Beneficiaries Attendance Summary Report</td>
</tr>
<tr>
<td>SBFP Form 6-B: SBFP Consolidated Program Terminal Report (Nutritional Status)</td>
<td>Report 7: Photo Documentation of School Feeding Operation</td>
</tr>
<tr>
<td>SBFP Form 6-C: SBFP Consolidated Program Terminal Report (Percentage Attendance)</td>
<td></td>
</tr>
<tr>
<td>SBFP Form 6-D: SBFP Consolidated Program Terminal Report (Procurement Process)</td>
<td></td>
</tr>
<tr>
<td>SBFP Form 7: SBFP Questionnaire for the Progress Monitoring and Evaluation (Central Office)</td>
<td></td>
</tr>
<tr>
<td>SBFP Form 8: SBFP Questionnaire for the Progress Monitoring and Evaluation (Regional Level)</td>
<td></td>
</tr>
<tr>
<td>SBFP Form 9: SBFP Questionnaire for the Progress Monitoring and Evaluation (Division Level)</td>
<td></td>
</tr>
</tbody>
</table>

These reports have been useful for monitoring and evaluation by ACED. However, the softcopies of these forms are usually not properly stored for longitudinal study over the course of five years. It is then necessary to have the appropriate software and hardware to gather and store these reports.

**Performance**

*Resource Performance*

Despite the lack of volunteers on some days, the central kitchen was able to feed all its beneficiaries for 120 days every school year.

<table>
<thead>
<tr>
<th>SY</th>
<th>only K-6</th>
<th>+Daycare</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012-13</td>
<td>5,265</td>
<td>none</td>
</tr>
</tbody>
</table>
Although the cost per student per day is pegged at 16 pesos (0.31 USD or Php1620= 37USD for 120 days), due to the economy of scale in the central kitchen approach, the actual meal cost per child is only at 11.50 pesos or less per day (0.23 USD or PhP1,380=27USD for 120 days). Hence, the program operational performance is effective and efficient.

<table>
<thead>
<tr>
<th>Year</th>
<th>Beneficiaries</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-14</td>
<td>8,542</td>
<td>16,667</td>
</tr>
<tr>
<td>2014-15</td>
<td>7,116</td>
<td>15,273</td>
</tr>
<tr>
<td>2015-16</td>
<td>6,409</td>
<td>15,288</td>
</tr>
<tr>
<td>2016-17</td>
<td>5,756</td>
<td>15,288</td>
</tr>
<tr>
<td>2017-18</td>
<td>8,000</td>
<td>16,700</td>
</tr>
</tbody>
</table>

### Strategic Objectives

**Sustainable Program Setup**

Although the ACED Blueplate Valenzuela operations is supervised by an ACED personnel, all the kitchen personnel and volunteers are from Valenzuela. In fact, ACED is already transitioning the kitchen to be fully managed by Valenzuela LGU. The current Kitchen Manager for Operations is being trained as Program Coordinator. The complete handover of the program is expected to happen in a year or two.

The most important aspect of the possible sustainability of this feeding program is the policy environment under which it is implemented, which is discussed in the next section.

**Local Development**

There is no current plan yet to shift procurement to smallholder farmers in Valenzuela or neighboring towns. There was, however, an attempt to develop a Tofu-making venture as part of the livelihood program in the relocation site for informal settlers during the school year 2014-15. It proved profitable as tofu is one of the main ingredients in the feeding menu, but the program was ceased because the funds were mismanaged.

**Established Strategic Objectives**

**Education and Equitable Access**

One of the aims of the feeding program is to improve the academic performance of the beneficiaries as measured by their grades. The table below summarizes the percentage of beneficiaries with passing rate (>75%) and failing rate (<75%), and those whose dropped out of school within the school year. The table shows that...
more than 93% of the beneficiaries get passing marks at each school year. However, an in-depth statistical analysis must be done on longitudinal set of data to be able to conclude that indeed the feeding program improve the academic performance of the beneficiaries.

<table>
<thead>
<tr>
<th>SY</th>
<th>&gt;75%</th>
<th>&lt;75%</th>
<th>DO</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012-13</td>
<td>4,810 (93.8%)</td>
<td>318 (6.2%)</td>
<td>137 (2.6%)</td>
</tr>
<tr>
<td>2013-14</td>
<td>8,319 (98.43%)</td>
<td>133 (1.57%)</td>
<td>90 (1.05%)</td>
</tr>
<tr>
<td>2014-15</td>
<td>6,932 (99.30%)</td>
<td>49 (0.7%)</td>
<td>135 (1.09%)</td>
</tr>
<tr>
<td>2015-16</td>
<td>6,134 (98.95%)</td>
<td>65 (1.05%)</td>
<td>80 (1.27%)</td>
</tr>
<tr>
<td>2016-17</td>
<td>4,671 (94.65%)</td>
<td>70 (1.42%)</td>
<td>194 (3.93%)</td>
</tr>
</tbody>
</table>

The usual reasons for dropping out included change of residence, family and financial problems, illness or health concerns, among others.

Nutrition and Health

Consistently, the feeding program as achieved its aim to rehabilitate about 90% of the beneficiaries to normal BMI at the end of the feeding cycle. The table below gives the year-end percentage of the beneficiaries who recovered from undernourishment and the percentage of those who remained undernourished.

<table>
<thead>
<tr>
<th>SY</th>
<th>% Imp</th>
<th>% Retained</th>
<th>Drop out</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012-13</td>
<td>86.53%</td>
<td>11.66%</td>
<td>1.80%</td>
</tr>
<tr>
<td>2013-14</td>
<td>88.42%</td>
<td>10.52%</td>
<td>1.05%</td>
</tr>
<tr>
<td>2014-15</td>
<td>90.53%</td>
<td>7.57%</td>
<td>1.90%</td>
</tr>
<tr>
<td>2015-16</td>
<td>89.60%</td>
<td>9.19%</td>
<td>1.25%</td>
</tr>
<tr>
<td>2016-17</td>
<td>86.31%</td>
<td>9.73%</td>
<td>3.96%</td>
</tr>
</tbody>
</table>

So far, there has been no evaluation done on the value transfer.

6. POLICY ENVIRONMENT OF THE NATIONWIDE SCHOOL-BASED FEEDING PROGRAM

In 2014, the DepEd, in partnership with the Department of Social Welfare and Development (DSWD) initially implemented a nationwide SBFP with the guidelines stipulated in DepEd Order No. 37, s. 2014. In 2015, the SBFP became the sole initiative of the DepEd as indicated by DepEd Order No. 33, s. 2015.

As the SBFP becomes a regular national program of the DepEd, the government issued a number of policy instruments to provide the overall framework in the implementation of a nationwide school-based feeding program. One of the most comprehensive guidelines on SBFP is the Department of Education’s (DepEd) Order (DO) No. 51, s. 2016. This DO maps out the required series of activities beginning from the pre-feeding, to actual feeding, and post-feeding phases of the program.
This DO is an attempt to increase the efficacy, and at the same time streamline the processes involved in a nationwide SBFP as it provides very specific guidelines in the sharing of responsibilities among the various feeding program stakeholders (i.e. DepED, LGU, NGOs/CSOs), as well as, the different possible modalities of these partnerships. As a matter of fact, the different modalities adopted in the ACED and GK feeding operations are the modalities enumerated in DO No. 51.

Additional features of DO No. 51 include the provisions for the gathering of initial baseline information about the nutritional status of targeted children beneficiaries, a system to efficiently monitor program implementation, and a mechanism to evaluate SBFP successes and challenges. In this sense, the current SBFP program design, as stipulated in DO No. 51, is an improved iteration that builds on the hits and misses of previous SBFP attempts of the government. In this sense, DO No. 51 builds on existing but related departmental orders. One such example is DO No. 8, s. 2007 pertaining to the management of school canteens. Aside from issuing the guidelines in serving only nutritious food in school, DO No. 8 also specifically mandates that 35-40 percent of the income of school canteens be allocated for SBFP.

Meanwhile, a separate but related set of policy guidelines on healthy food and beverage choices in DepEd offices, DepEd Order No. 13, s. 2017 was issued in March of 2017. This DO is another attempt to promote a healthier lifestyle for all the members of the DepEd community through better nutrition education, and better access to nutritious food within the school premises.

In August of this year (2017), the DepEd issued the most recent guidelines on SBFP, DO No. 39, s. 2017. The DO claims that as much as 73% of all undernourished beneficiaries improved to a normal nutritional status after 120 days of feeding. School attendance also improved significantly and is now averaging 98%. Qualitative improvements, both at the individual-learner level and at the organizational level are also noted. These include better class participation and healthier habits among feeding beneficiaries (e.g. washing of hands before and after eating, brushing of teeth, etc). As claimed in DO No. 39, there is now an improved collaboration and coordination among the various stakeholders in the SBFP. While these gains are most laudable, there is still a need to validate these findings, and to establish whether these improvements are indeed the direct result SBFP.

Tabunda, Albert, and Angeles-Agdeppa (2016) also pointed out some of the basic weaknesses in the SBFP program design. For example, the need to properly train teachers in measuring the height and weight of school children. These data are crucial in assessing the improvement, or the lack thereof, in the nutritional status of school children at the end of a feeding cycle. Overall, there is also a need to improve the monitoring skills, including the proper documentation and recording of all relevant data by DepEd personnel overseeing the feeding program. In spite of these kinks, Tabunda, Albert, and Angeles-Agdeppa (2016) still recommended the expansion of the feeding program though this has to be done in combination with other mechanisms that will address the root cause of malnutrition in the
country.

The members of the Congress, both at the lower and the upper houses, are apparently cognizant of the need to have a more expansive school feeding program that is responsive to the identified weaknesses of the SBFP in its current form. At the upper house, Senate Bill 1279 proposing the creation of a national school feeding program to combat hunger and under nutrition for all public basic education students was submitted to the Senate last December 2016. Meanwhile, a parallel proposal, House Bill No. 5269 also known as the “National School Feeding Program Act” was submitted, and approved by the Committee on Basic Education and Culture in the lower house last 06 December 2016.

Although both bills bat for a universal feeding program, from kindergarten to grade school 6 in all public school in the country, there are also some notable differences. One, the intricacies of school feeding such as food fortification and fresh milk provision are highlighted more in the lower house version. Also, the importance of interagency coordination and cooperation, as well as, the need for better program monitoring are also more pronounced in the lower house version, HB 5269. The tasking and assignments of different government agencies are also more prominent in the lower house version, including the proposal to create the Child Feeding and Nutrition Commission. While the final version of the National Feeding Program Act will still be debated in the joint session of the Congress, the identified provisions in the draft versions are clear indications that both houses of the Congress are attempting to respond, and improve the current SBFP Program design.

5. CONCLUSION

We looked an implementation of the ACED Blueplate Central Kitchen approach in Valenzuela City using the Supply Chain Framework. It was seen that the implementation is effective and efficient and, most importantly, sustainable since the transfer of the central kitchen technology to the LGU from ACED is integrated since the start of the program. However, there is a need to improve its data collection and management for monitoring and evaluation. Another aspect that will ensure its sustainability is the policy environment under which it is implemented. If the bill on the national feeding program becomes a law, the ACED Blueplate Central Kitchen Approach is a proof-of-concept that a large-scale feeding program may be effective and efficient.

6. ACKNOWLEDGEMENT

The authors would like to thanks ACED and GK.

7. REFERENCES


PRELIMINARY STUDY OF PREPUCE SKIN CELL CULTURE: IDENTIFICATION OF OCT-4 POSITIVE CELLS AND KI-67 POSITIVE CELLS FROM DERMIS AND HYPODERMIS LAYER

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ABSTRACT

The study on pluripotent stem cell in prepuce is one of the topic on stem cell that is not yet common but rapidly developing. Several markers such as Oct-4 for pluripotency and ki-67 for proliferation have been reported in prepuce. To generate these stem cells, careful isolation and cell culture are performed. Better understanding of stem cells in prepuce can open more possibilities in skin regeneration and skin reconstruction treatment such as skin graft. This research aims to perform initial establishment method for isolation and culture of prepuce skin’s dermis and hypodermis and to identify oct-4 and ki-67 positive cells from the culture-derived cells.

The dermis and hypodermis of prepuce were isolated and cultured in 12-well plate for 7 days and transferred into 24-well plate. The culture was observed for fibroblastic-like cells. The cells were harvested using trypsinization and centrifugation. The pellets were fixated on methanol to be mounted on histological slides. Immunocytochemistry using oct-4 and ki-67 antibody were performed on the samples. The samples were observed under light microscope.

Fibroblastic-like cells were found in one of the culture on the 7th day. Dermis culture has more pellet of harvested cells compared to hypodermis culture. Histological slides examination revealed few number of cells and debris can be found. Oct-4 positive cells were found in dermis sample and there were no ki-67 positive cells.

To conclude, more cells are needed to further analyse oct-4 and ki-67 positive cells in dermis and hypodermis of prepuce. Therefore, optimization of isolation and culture method for prepuce is still needed.

Keywords: Cell culture; immunocytochemistry; ki-67; oct-4; preputial skin

1. INTRODUCTION

Studies have proved the existence and use of stem cells in embryonic and somatic cells such as bone marrow, umbilical cord, and the skin. Recently, studies have identified that a commonly discarded skin after circumcision, also known as the
preputial skin or foreskin of the penis, has pluripotency (Hovatta et al., 2003; Horsley et al., 2006; Aasen and Belmonte, 2010). The prepuce has inner epithelium and outer epithelium (Cold and Taylor, 1999). The inner membrane (mucosa) is adjacent to the penile gland while the outer membrane (cutaneous) directly contacted to the external environment (Cold and McGrath, 1999). The function of the outer prepuce is to protect the glans penis, ostium urethra, and inner epithelium (Cold and Taylor, 1999). The prepuce consists of outer glabrous skin, dartos muscle, and inner mucosal epithelium. During the embryologic development, ectoderm, neuroectoderm, and mesenchyme collided and form the male prepuce (Cold and Taylor, 1999). This collision creates the unique structure of the prepuce which consists of squamous mucosal epithelium, lamina propria, dartos muscle, dermis, and outer glabrous skin but is lacking in adipose tissue and hair follicles. The majority of sensory receptor in the prepuce is the Meissner’s corpuscle located in the epithelial basement membrane (Cold and McGrath, 1999; Cold and Taylor, 1999).

Dartos muscle consists of smooth muscle cells surrounded with elastic fibers. The dermis of the prepuce consists of blood vessels, connective tissue, scattered sebaceous glands, and Meissner’s corpuscle (Cold and Taylor, 1999). Compared to the lamina propria, elastic fiber content in the dermis is denser. This elastic tissue located in prepuce dermis, frenulum, and dartos muscle allows the prepuce to return to its original shape after erection or manual retraction. The outermost part of prepuce, outer glabrous skin, consists of keratinized stratified squamous cells, melanocyte in the basal layer, langerhans cells as immune defence system, and Merkel cells for endocrine function (Cold and Taylor, 1999).

Previous studies have identified oct-4 (marker for pluripotency) and ki-67 (marker for proliferation) within the cells of hair follicles and sebaceous glands of the skin (Hovatta et al., 2003; Horsley et al., 2006; Aasen and Belmonte, 2010). Other studies have also shown that cells expressing oct-4 and ki-67 are found in prepuce especially in dermis and hypodermis of preputial skin (Anindhita, 2015; Dharmaningputri, 2015).

Oct-4 is a transcription factor that belongs to POU or Pit-Oct-Unc transcription factor family which can activate or repress gene expression (Pan et al., 2002; Jerabek et al., 2014). It is a regulator of transcription that creates phenotypic changes in stem cell differentiation and is found to be most active in embryonic stem cells for embryonic development. Initially, oct-4 is expressed in all blastomere (Pan et al., 2002; Jerabek et al., 2014). In the blastocyst stage, only the inner cell mass (ICM) is oct-4 positive while the trophoblast (the surrounding wall) is oct-4 negative.

It can activate gene expression by binding to the octamer sequence AGTCAAAT near the target genes by using POU domain, a special characteristic of POU family of transcription factor (Pan et al., 2002; Jerabek et al., 2014). The N domain of oct-4 is composed of proline and acidic residue that functions for transactivation. On the other end, the C domain has a cell-type specific activity
and thus it can activate the genes that do not respond to N domain. This unique structure of Oct-4 explains its functional range of diversity such as to maintain pluripotency of stem cells and the differentiation of the stem cells (Pan et al., 2002).

The Oct-4 protein is expressed in embryonic stem cell particularly in the nucleus of the cell. However, recent studies have shown that Oct-4 expression can be found in mature cells such as the basal layer of human epidermis, human peripheral blood mononuclear cells, human hair follicle, and cancer cells (Tai, 2004; Zangrossi et al., 2007; Mimeault and Batra, 2010). Research done by Tai, et al. using dog and rat specimens has shown that Oct-4 is expressed in adult stem cells, its immortalized non-tumorigenic derivatives, and tumorigenic cells (human breast epithelial, kidney, liver, mesenchymal, pancreatic, and gastric stem cells) (Tai, 2004).

Ki-67 is a protein that is expressed in proliferating cells but its functional role is still unclear (Scholzen and Gerdes, 2000). The expression Ki-67 occurs mostly in late G1, S, G2, and M phase of cell cycle and could not be detected in G0 phase (Schonk et al., 1989; Scholzen and Gerdes, 2000; Bullwinkel et al., 2006). In early G1 phase, Ki-67 expression is few and located in the nucleoplasm in numerous foci. During the G2 phase, a higher expression of Ki-67 was noted. However, the highest expression of Ki-67 is observed in metaphase and then decreasing during the anaphase and telophase (Scholzen and Gerdes, 2000). Ki-67 is commonly used as a diagnostic tool for diseases with high proliferation rate such as breast cancer and prostate cancer (Scholzen and Gerdes, 2000; Whitfield et al., 2006).

Ki-67 can be found in the bulge of hair follicle and the outer root sheath specifically in proliferating sebocytes (Horsley et al., 2006). Recent research has shown that the Ki-67 positive cells in prepuce skin are mostly found in the basal layer of the epithelium (Dharmaningputri, 2015). Between Ki-67 positive cells between inner mucosa epithelium and outer glabrous skin, it appears that there are more ki-67 positive cells in the inner prepuce (Dharmaningputri, 2015).

Due to its expression in all proliferating cells, Ki-67 is suitable as an operational marker to determine the growth fraction of a cell population (Bullwinkel et al., 2006; Whitfield et al., 2006). Furthermore, defects in cell cycle regulation that is regulated by specific genes involved in cell proliferation are the distinct characteristic of cancer pathogenesis (Whitfield et al., 2006).

A study showed the application of prepuce as the donor for full thickness skin graft (FTSG) and split thickness skin graft (STSG) (Ashley, 1937). Skin graft donor could be autograft (donor source from the same individual), homograft (donor source from another individual of the same species), and Xenograft (donor source from different species) (Thornton and Gosman, 2004; Dumasari, 2008). The prepuce can be used as an autograft or homograft with the condition that the recipient is of the same blood group (Ashley, 1937).
Other than skin grafts, the preputial skin’s fibroblasts are known for their use as feeder cells for human embryonic stem cells culture (Hovatta et al., 2003). With the findings of ki-67 and oct-4 within the prepuce, the needs of better understanding of preputial skin increased. Establishing a method to isolate and culture preputial skin’s dermis and hypodermis which have not been studied before is crucial. This research aims to perform a preliminary method for isolation and culture of dermis and hypodermis cells and then identify the oct-4 and ki-67 positive cells.

2. METHODS

Six samples from circumcised boys aged 11-12 years old were taken with informed consent of their parents/guardian during mass circumcision event on April 30th 2016. This preliminary study modifies the method conducted by Huang et al. 2013.

2.1. Method optimization

Two optimizations were done. In the first optimization, samples taken from children below 7 years of age were transported using phosphate-buffered saline (PBS), penicillin-streptomycin (P/S), and fungizone transport media. The samples were kept in the transport media in 3°C and processed within 24 hours. Half of the samples were cultured using complete αMEM (alpha modification minimum essential medium eagle) and the other half using DMEM (Dulbecco’s modified eagle’s media). The culture was maintained for 13 days and shows no sprouting of new cells. In the second optimization, EpiLife was used as transport media. The samples were processed within 7 hours instead of 24 hours. New cells sprouted on the 7th day in cultures with DMEM and cultures with αMEM.

2.2. Samples transportation and storage

The samples were washed with povidone iodine three times and then with 70% alcohol three times immediately after circumcision. The samples were stored in tubes filled with transport media (PBS with 2% fungizone and 2% P/S) and kept at 3°C for no more than 48 hours.

2.3. Epidermis, dermis, and hypodermis isolation
The blood residue on the samples were washed with PBS and then with povidone iodine and then 70% alcohol. The sample was cut to two pieces. The first piece was kept as whole skin (cutaneous and mucosa side intact). The hypodermis/dartos muscle of the first piece was isolated by gently scraping thin layers of the hypodermis with a scalpel from the incision site of the circumcision leaving the epidermis and dermis part of the skin intact. The second piece was cut to isolate the cutaneous and mucosa part of the sample. The hypodermis of the cutaneous part and the mucosa part were isolated from the dermis using the same method as the first piece. The hypodermis of the whole skin, cutaneous part, and mucosa part of the sample was put into its individual wells of a 12-well plate.

The intact epidermis and dermis of whole skin, cutaneous, and mucosa part were put into a falcon tube containing 4.5 ml of dispase solution (DMEM glucose 4500mg/L and dispase 1 U/g with 2U/ml concentration) to isolate the epidermis from the dermis. The sample was incubated overnight at -3°C. Next, the samples were thawed in 37°C water bath for one hour. The sample was put into a petri dish and cleansed with PBS. The epidermis was separated from the dermis by pulling the epidermis with a clamp or tweezers.

2.4. Cell culture

The cell culture technique used in this research was cell culture from an explant. After isolation of the hypodermis, six pieces of hypodermis were put into wells in a 12-well plate with 100 µL of complete media (DMEM high glucose + 10% Fetal Bovine Serum + 1% P/S + 1% Fungizone +1% heparin +1% Platelet Rich Plasma) that was filtered with 0.02 µL filter. The isolated dermis of whole skin sample, cutaneous sample, and mucosa sample were cut into small soft pieces with surgical scissors and were placed onto their respective well in a 12-well plate. 100 µL of complete media were added into each well. The plates were incubated at 37°C and 5% CO₂. The media was changed every 48 hours and samples were observed daily for any growth of fibroblastic-like cells.

2.5. Cell harvest and passage

The media in the well was extracted into a tube and centrifuged. The cells were resuspended with fresh complete media. These cells were transferred into a well in a 24-well plate to allow cell growth without the explant. 200 µL of trypsin (1:15 dilution with PBS) was added to the well to harvest the remaining cells attached to the well. The cells were incubated for 5 minutes at 37°C and 5% CO₂. Media was added to the well to stop the trypsin. The explant in the wells were discarded and the remaining content of the wells was moved into a tube to be spun at 1200 rpm for 10 minutes. The supernatant was removed and the cells were resuspended in fresh media. The resuspension was put into wells of a 24-well plate.

For immunocytochemistry, the culture media was moved into a tube and spun at 1200 rpm for 10 minutes. The supernatant was discarded and cell pellet was resuspended in 300 – 500 µL methanol for fixation. Trypsin was added to the cells attached on the bottom of the well and then incubated for 5 minutes at 37°C and 5% CO₂. The cells were resuspended in media and transferred into a tube to be
centrifuged. The supernatant was removed and cell pellet was resuspended with methanol for fixation.

2.6. Cell mounting and immunocytochemistry

100 µL of cells fixated in methanol were mounted onto a slide and then incubated in the oven for approximately 10 minutes. The slides were then washed with aquades for 1 minute. Blocking peroxidase endogen (H2O2 30% + methanol) were added onto the slides and incubated for 10 minutes in moist chamber at room temperature. The slides were washed with aquades 3x1 minutes. Non-specific protein blocking (1.5% donkey serum + PBS) were added on the slides for 30 minutes incubation in moist. Primary antibody (1:50 aliquot of oct4 or ki67) were added and incubated overnight in moist chamber. Next, the slides were washed for 5 minutes three times with PBS. The slides were then incubated with secondary antibody (biotinylated antibody + blocking serum + PBS) in moist chamber at room temperature for 30 minutes. The slides were washed with PBS for five minutes three times. Next, the slides were incubated in avidin-biotin-HRP at room temperature for 30 minutes in moist chamber. The slides were washed again with PBS before incubated with diaminobenzidine (10 drops of of 10x substrate buffer + 2 drops of 50x DAB + 2 drops of 50x peroxidase substrate + PBS for 3.5ml) in moist chamber for 1 minute). The slides were washed with aquades 3x5 minutes. Hematoxilin counterstain was added for 5 seconds. The slides were washed again with aquades for 5 minutes. The slides were dehydrated with alcohol 80%, 95%, and 100% for 5 minutes each. The slides were dipped into xylol 2x5 minutes. The slides were covered and ready to be observed.

2.7. Data analysis

Each well was observed and documented using Zeiss inverted light microscope. Fibroblastic-like cells sprouting from the explants were observed and documented using AxioCam. A histological slide of rat testis was stained with oct-4 and ki-67 to be used as the positive control. Positive cells’ nucleus will appear brown after immunohistochemistry. For the negative control, an unstained sample was used. The oct-4 and ki-67 immunocytochemistry slides were observed with Olympus microscope with 400x magnification. Five microphotos of each slide were taken using OptiLab™ (OptiLab, Indonesia). Positive cells identified from the five photos were counted and divided by five.

3. RESULTS AND DISCUSSION

3.1. Daily observation of cell culture

Six samples were obtained for this research. Three samples (sample A-C) were taken using conventional circumcision method and another three (sample D-F) were taken using the cauterisation method. The samples were taken from 11-12 years old children and transported in falcon tubes containing transport media and stored for 48 hours in 4°C.

Samples of hypodermis (HD), whole dermis (DU), mucosa dermis (DM), and cutaneous dermis (DC) from sample A-C and sample D-F were cultured in their
specific 12-well plates. First day of culture showed attachment of the sample’s explant on to the well surface. However, sample A-C explant were not attached as firmly as sample D-F. Hypodermis culture were maintained eight days and the dermis culture were maintained for 7 days. There was no prominent cell sprouting from the explant in those days. However, fibroblastic-like cells were found around the explant (figure 2).

On the 9th and 8th day, hypodermis and dermis culture from sample A-C and D-F were harvested, pooled, and passaged to 24-well plate without the explant. Before trypsinisation, the culture media from samples A-C and D-F were taken and centrifugated to collect the cells floating in the media. The cells from this extraction were observed separately from the cells from trypsinised extraction. The passages were observed and was harvested after two days. Whole dermis from sample D was not harvested and was observed until the 10th day. Observation of harvested cells after centrifugation showed a larger pellet of cells.

During the culture observation, there was no visible sprouting of cells from the explant and small number of cells were present in the wells. Observation of harvested cells mounted on slides also showed small amount of cells present. There are several factors that may explain this result.

First, the age of the child the sample was obtained from. This research used prepuctial skin from 11-12 years old children. A study by Somuncu et al. (2015) cultured cells from newborn’s preputial skin with similar isolation method and low glucose culture media (DMEM 1000 mg/L) (Somuncu et al., 2015). The culture showed cell sprouting in 3-4 days and reached confluency in eight days. This difference in result may be due to of the prepuce skin anatomical and histological structural difference and cells and protein components of the skin.

Another factor that may contribute is the time range from sample collection to sample processing. Several studies processed the sample several hours after obtaining them or within the same day (Aasen and Belmonte, 2010; Huang et al., 2013; Somuncu et al., 2015). The samples in those previous studies were transported in PBS, Hank’s Buffer Salt Solution, or EpiLife. Due to the lack of

![Figure 2. Fibroblastic-like cells (white arrow) are found in hypodermis cell culture of sample A on 7th day using 100x magnification. Observed under Zeiss inverted light microscope and documented with AxioCam.](image)
available facility to immediately process the samples, they were kept in transport media (PBS with 2% fungizone and 2% P/S) and processed within 48 hours. A study by Aasen et al. 2010 stated that samples should be processed immediately within 24 hours. A gradual loss of yield occurred after 24 hours which could cause less cells that survived (Aasen and Belmonte, 2010). Interestingly, the type of transport media, salt solution, or culture media showed no prominent influence on the result of the culture.

Due to time constraint, we were not able to grow more cells and do more passages. Furthermore, there had been no report of hypodermis culture from preputial skin which made our team to be one of the first to try to construct a method of hypodermis culture derived from preputial skin.

Another factor that may contribute is the difference of environment between in vivo and in vitro (Cukierman, Pankov and Yamada, 2002). The dermis is mainly composed of fibroblasts and collagen which needs extracellular matrix (ECM) to survive. Fibroblast survival, growth, differentiation, and migration is mediated by physiologic signalling delivered via cell-matrix adhesion. In vivo, a three-dimensional cell-ECM environment supports signalling optimally. The use of two-dimensional flat rigid surface of a well plate affect the cell-ECM structure and thus affect these signalling which contributes to cell growth and survival. A better outcome may be possible with the use of 3D collagen gel or cell-derived 3D matrix which can be considered for future studies (Cukierman, Pankov and Yamada, 2002).

3.2. Identification of oct-4 and ki-67 positive cells

Six slides were observed under light microscope after immunocytochemistry process. In hypodermis slides, there were no identifiable cells and debris were present. In dermis slides, some cells were identified. In a slide containing sample from trypsinised dermis, there were an abundant number of cells identified. Cells with non-specific signalling were present in trypsinised hypodermis sample. Oct-4 positive cells were found in trypsinised dermis slide (figure 3d). Ki-67 positive cells were not found in all slides.

However, this result should be interpreted carefully as there were contaminants such as debris and the small number of cells present. Keratinocytes were also present in one of the dermis slides which indicate imperfect isolation of the dermis. For future study, immunocytochemistry done directly without harvesting the cells out of the wells may be an alternative to risking loss of cells during harvest and slide wash (Somuncu et al., 2015).
Figure 3. (a) Negative control 400x magnification. (b) Positive control oct-4 from rat testis 400x magnification. (c) Positive control ki-67 from rat testis 400x magnification documented using Samsung A5. The slides were observed under Olympus light microscope and documented using OptiLab™. (d) Positive oct-4 cell found in dermis slide with 400x magnification.
4. CONCLUSION

Cell culture from preputial skin explant can be done. However, we have concluded that a higher number of cells are needed to analyse oct-4 and ki-67 positive cells in dermis and hypodermis of preputial skin. Therefore, further method optimisation, samples obtained from younger subjects, and quicker transport time are needed. We also have concluded that better isolation method to separate epidermis, dermis, and hypodermis completely is needed.

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Household Food Security, Childhood Obesity, and Taguchi Method: A New Era in Public Health Studies

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ABSTRACT

Household food security, parental socioeconomic, and physical activities are the main indicators effective on childhood obesity. In the coming years, regression, structural equation modeling and partial least square are the most statistical modeling in public health studies. The main objective of this study to apply Taguchi method to introduce a new pattern for analyzing BMI of the children as the representative of childhood obesity. The data were collected from 630 families from Urumqi, Xinjiang, China. The introduced statistical application, Taguchi method, is realistic and reliable approach to exploring which combination of parental socioeconomic, household food security and physical activities bring high obesity in childhood.

Keywords: complex analysis, children obesity modeling, public health studies

1. INTRODUCTION

In public health studies, specific in children obesity modeling, research scholars are willing to find out the effective factors on the obesity with proper statistical technique. Literatures of children obesity modeling confirmed that household food security (Hui, Binti, & Salarzadeh Jenatabadi, 2017; Kaur, Lamb, & Ogden, 2015; Mosli et al., 2015), parental socioeconomic (Andrews, Silk, & Eneli, 2010; Ball, Mishra, & Crawford, 2002; Nau et al., 2015), physical activities (Donnelly et al., 2009; Kipping et al., 2014; Schwartz, King, Perreira, Blundell, & Thivel, 2017) for parents and children are the main concern factors by researchers.

In the recent decades, a new application of modeling which is named Structural Equation Modeling (SEM) have been used in different areas. Ordinarily, this application has a robust capability to combine both measurement (observed) and construct (non-observed) variables with causal relations among them which is leading to dependent (or output) variable.
SEM has been using as a better alternative of general linear model (GLM) like linear/ or non-linear regressions, factor analysis, and etc.

Nevertheless, above mentioned modeling technique do not have capability to answer a question that is: what level or category of independent variables leading to higher or lower dependent variables?

Taguchi method is able to answer above question. Taguchi method is applied different types of engineering studies (Motorcu, Isik, Kus, & Cakir, 2016; Pandey, Murugesan, & Thomas, 2017). However, lake of studies have done in public health studies. Therefore, the main purpose of this study is to introduce Taguchi method to find out a patter which is combination of the level of inputs those leading for optimizing of output.

2. METHODS

2.1. Taguchi Method

Taguchi method is based on measuring of standard deviation and measuring by calculating the variation of the expected value with bellow circumstances:

a) The high standard deviation determines that the observed values are spread out from the expected value due to noise factors.

b) The lower standard deviation determines that the observed values are nearby to the expected value due to noise factors.

Controlling noise factors is not easy and the researchers believe that the both values of observed and noise factor are to be controlled by Signal to Noise (SN) ratio. SN ratio defines the impact rate of noise factors on performance characteristics and quantifies the variability (Chandrasekar, Kannan, Priyavarshini, & Gayathri, 2015). Based on the type of optimization we have three applications of SNs which are defined with the following calculations.

a) \[ SN = -10 \log \left( \frac{\sum y^2}{n} \right) \] if we are looking for optimal situation based on smaller rate

b) \[ SN = -10 \log \left( \frac{\sum y^{1/2}}{n} \right) \] if we are looking for optimal situation based on larger rate

c) \[ SN = 10 \log \left( \frac{y}{y^2} \right) \] if we are looking for optimal situation based on nominal rate
In above formulas

- \( y \): the observed data
- \( n \): the number of observations
- \( \bar{y} \): the average of observed data,
- \( s^2 \): the variance of \( y \)

Figure 1 shows the process analysis based on Taguchi method.

![Application steps in Taguchi method](image)

Figure 1- Application steps in Taguchi method (Salarzadeh Jenatabadi, Babashamsi, & Yusoff, 2016)

### 2.2. Size of Dataset

Among seven primary school of Urumqi City, Xinjiang Province, China, 630 questionnaire were distributed. For collecting data 25 bachelor students in from management and public health public were helped in this study. We requested from the volunteer parents to have their child’s health cards during filling the questionnaire. The average time for filling the questionnaires were 15 to 20 minutes and sampling process is done from 5 September 2016 to 20 October 2016.

### 3. RESULTS AND DISCUSSION

In this study we applied \( L_{32} \left(3^{4} 1^{2}\right) \) orthogonal array and MINITAB software were used to investigate the impression of each erosion test parameter. Based on \( L_{32} \left(3^{4} 1^{2}\right) \) Taguchi experimental design, 32
participant should be extracted from the whole data set. Four factors/or input contain family food security, parental socioeconomic, parental physical activity, and children physical activity. Table 1 shows the coding structure of the study for analyzing data with MINITAB software.

Table 1. coding of research variables for Minitab software

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Food Security</td>
<td>Insecure</td>
<td>Secure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parental Socioeconomic</td>
<td>Low</td>
<td>Moderate</td>
<td>Good</td>
<td>Very Good</td>
</tr>
<tr>
<td>Parental Physical Activity</td>
<td>None</td>
<td>1 or 2 time</td>
<td>3 or 4 time</td>
<td>More than 4 time</td>
</tr>
<tr>
<td>Children Physical Activity</td>
<td>None</td>
<td>1 or 2 time</td>
<td>3 or 4 time</td>
<td>More than 4 time</td>
</tr>
</tbody>
</table>

In our research we are willing to understand the combination of which levels of input variables (family food security, parental socioeconomic, parental physical activity, and children physical activity) have higher obesity of the children. We measure Body Mass index (BMI) of the children as the representative of the obesity rate.

Figure 2 shows the outputs of MINITAB software.

![Figure 2. MINITAB software output](image)

The Figure 2 show that family food security does not have significant impact on the outputs of the study. However, this impact for parental socioeconomic, parental physical activity, and children
physical activity is significant. The main results of Figure 2 is that the combination of the family who have good socioeconomic and children never do physical activity have the higher BMI even their parents do 1 or 2 times physical activity per week.

4. CONCLUSION

With above interpretation and discussion from data analysis with Taguchi method we able bring up that the introduced technique has capability to present a pattern, not modeling, from our data to explain which combination family and children characteristics having higher children obesity in their household.

5. ACKNOWLEDGEMENT

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Hierarchy Process and the Taguchi Method to Evaluate the Malaysian Users’ Willingness to Pay for Public Transportation. *Symmetry, 8*(9), 90.

THE CORRELATION BETWEEN DIET AND GIVING EXCLUSIVE BREASTFEEDING TO STUNTING CHILDREN UNDER FIVE YEARS OF AGE

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ABSTRACT

Background: Stunting is a linear growth disorder caused by malnutrition of chronic nutrient intake or recurrent chronic infectious diseases that indicated by the z-score of height by age <-2 SD base on WHO standard. The national stunting prevalence was 37.2%, while Riau was 26.8% in 2016. The study aimed to determine the correlation between diet and giving exclusive breastfeeding to stunting in children under five years of age.

Materials and methods: An observational case control design conducted in the work area of Limapuluh Community Health Centre Pekanbaru. The samples were 60 stunting children under five and control were 60 children who are not stunting. Data were collected by observation and interview, using questioner. Data analysis was performed by univariate and bivariate, with 95% confidence interval.

Results: The results showed that 75.8% of diet was good and 55% of children under five were not given exclusive breastfeeding. Chi-square test obtained there is a relationship of exclusive breastfeeding with the prevalence of stunting (p value = 0.002, OR = 3.500).

Conclusions: There is a relationship of exclusive breastfeeding with the prevalence of stunting.

Acknowledgements: The author thanks Iswadi, SKM, M.KL leader of Limapuluh Community Health Centre Pekanbaru

Keywords: Children under five; Community Health Centre; Diet; Exclusive breastfeeding; Stunting

1. INTRODUCTION

Stunting or chronic undernutrition is another form of growth failure. Stunting is a long-standing situation, differ from acute malnutrition, a child with stunting often seen as having a normal, proportioned body, but is actually shorter than the normal height of a child of his or her age. Stunting is a cumulative process and is caused by inadequate intake of nutrients or recurrent infectious diseases, or both. Stunting reflect societal inequities such as inadequate nutritional intake during pregnancy, low of food patterns, poor-quality diets. In improverished settings, both of poor-quality diets and high rates of infection in pregnancy and in the first 2 year of lie, lead poor child growth (Unicef 2014).

According to (Huairunis, Rohmawati, & Ratnawati, 2016). Stunting is a chronic undernutrition and growth failure, but also a linear with growth disorder caused by recurrent chronic infections or both. Stunting in children is a risk factor for increased mortality, cognitive abilities, and low motor development and unbalanced body functions (Allen & Gillespie, 2001).

Stunted and severe stunted are percentage of children aged 0-59 months who are below
minus two standard deviations from median height-for-age. Height-for-age are indicator of chronic nutritional problems. Height status from each children under five years old were compared with a standardized Z-score using WHO standard anthropometry of children under five WHO. Height-for-age (TB / U) indicators based on WHO anthropometric standard (2005): severed stunting (Zscore is < -3.0), mild stunting (Zscore ≥ -3.0 s / d Zscore < -2.0) and mild stunting (Zscore ≥ - 2.0).

Stunting are related from varieties factors. According to UNICEF (1998) there are two main factors that caused stunting. First, inadequate food intake, such as lack of energy and protein. Second, lack of some micronutrients and infectious diseases. According to Soetjiningsih (1995) children's growth is influenced by genetic and environmental factors. In general, the impact of stunting is not only felt for individuals but also impact on global economy (Indo et al., 2015).

According to WHO (2013) the factors that caused stunting in children are divided into 4 major categories, thus are; family and household, inadequate food complementary, breastfeeding and infections. Family and household factors are further divided into maternal and environmental factors. Maternal factors include lack of nutrition during preconception, pregnancy, and lactation, low of mother height, infection, pregnancy in adolescence, phychological health, intrauterine growth restriction (IUGR) and preterm birth, short gestational distance, and hypertension. Environment factors include low of stimulation and activities in childhood, sanitation and water forces, poor access and food availability, inappropriate allocation of food in household, low education. The second factor that causes stunting is inadequate complementary food that is subdivided into three, poor-quality diets, inadequate food feeding, and food safety. Poor-quality diets provided low quality of micronutrient intake, limited of food variety and meat foods, junk food, and low-energy foods complementary. Inadequate of feeding frequency, during health and illness, consistency of delicate food, poor-quantity of feeding. Food safety could be contaminated from food and beverage, poor hygiene, unsafe storage and food preparation. The third factor that can cause stunting is improper breastfeeding because of late initiation, non-exclusive breastfeeding, too early termination of breastfeeding. The fourth factor is clinical and subclinical infections such as intestinal infections: diarrhea, environmental enteropathy, worm infections, respiratory infections, malaria, poor appetite due to infection, inflammation.

In global, about 1 in 4 infants measured stunting (UNICEF, 2014). According to Riskesdas Data, the percentage of stunting in Indonesia (moderate and severe) in 2013 was decrease 37.2%, from 2010 (35.6%) and 2007 (36.8%), but there is not significant different because the incidence of stunting is still fluctuating which is shown from the data above. In addition, data also shown a high prevalence that is still above the 30%.

According to WHO (2010), public health problems are considered severe, the evidence of stunting prevalence is 30-39% and serious if stunting prevalence ≥ 40%. In addition, if the prevalence of stunted children was public health problems if the prevalence of 20% or more. Therefore the percentage of stunted children in Indonesia was a public health problem and should be taken seriously and continuously from all related sectors according to the cause of the stunting problem.

Riskesdas 2013 shown the results of the Assessment of Nutrition Status (PSG) in 2015 also showed the results, 29% infants in Indonesia included in the category of stunting children. From the data, the incidence of stunting incidence in under fives of Indonesia has fallen into the category of public health problem because it has exceeded 20%, and almost fall into the category of public health problem that is considered heavy because stunting prevalence approaches 30%. This can be the basis for dealing with nutritional problems (stunting) in
Indonesia. Compared to some neighboring countries, the prevalence of stunting children in Indonesia is in the high category. Countries with high percentages of stunting are Vietnam (23%), Malaysia (17%), Thailand (16%) and Singapore (4%) (UNSD, 2014). Indonesia still has a quite diverse nutritional problems as it has been described by Global Nutrition Report 2014 which is Indonesia included in 17 countries among 117 countries, which have three nutrition problem that is stunting, wasting and overweight in balita (Kemenkes RI, 2016).

Evaluation of Nutrition Status (PSG) was conducted to assess the nutritional status of children under five years old. Data obtained through PSG activities, stunting prevalence (TB / U) in under-fives in Riau Province in 2016 was 26.8%. From the results obtained, stunting in the province of Riau has been included in public health problems because it has exceeded 20%, and almost approached the health problems that are considered severe because the prevalence is 30%.

Based on PSG report, prevalence of stunting in Pekanbaru City was 8.67%, and Lima Pulu Community Health Center is one of health centers in Pekanbaru City, with the highest stunting prevalence (19.67%). The reason of researcher interested in analyzed prevalence of stunting childrenon Lima Pulu Community Health Center because there is increasing prevalence of stunting equal to 5.34% from previous year from 14.33% become 19.67%.

2. METHODS

The method of this research used analytic observational with case control study design. This research was conducted in the working area of Lima puluh Community Health Center. The reason of chosen Lima Pulu Community Health because has the highest number of stunting events in Pekanbaru city and an increase in prevalence from the previous year. The prevalence of stunting at a fifth clinic of 19.67% is approaching the threshold of a universally agreed health problem with a 20% threshold value.

2.1. Population

Population in this research is all children under age 12-59 month who live in work area of Lima Pulu Community Health Centre. The population in this study was divided into 2 groups, the case group was all children under five years old age 12-59 months who experienced stunting including moderate and severe children under the TB / U index (Zscore < -2SD) and the control group population were all children aged 12-59 months who did not stunting (normal) based on TB / U index (Zscore ≥ -2SD).

2.2. Sample

The sample is part of the population calculated based on the calculation of the minimum sample size divided into case and control groups. Cases are stunting children as many as 60 children and control is a child who does not stunting as many as 60 children. The status of stunting children is obtained from secondary data of nutrition section of Lima Pulu Community Health Centre.

The sample size taken in the control case study was calculated using the formula from Stanley Lameshow et.al (1997):

\[
  n = \left[ \frac{2 \times \frac{P \times (1 - P)}{e^2}} {P - \frac{1}{2}} \right]^2 \\
  P = \frac{r}{(1 + r)} \quad \text{dan} \quad Q = (1 - P)
\]
The sample is divided into case and control groups. For this purpose, inclusion and exclusion criteria were established for case and control groups. The inclusion criteria for the following case groups:
1. Case groups are children aged 12-59 months who have stunting (short and very short) that have been measured using the anthropometric method with height-for-age (TB / U) (Zscore < -2SD).
2. Children who become case groups are recorded in register book weighing and settling in the research location.

The inclusion criteria for the control group in this study were:
1. Control groups are children aged 12-59 months who did not have stunting (normal) who had been measured using an anthropometric method with height-for-age (Zscore ≥ -2SD).
2. Children who become control groups are recorded in register book weighing and settling in the research location.

Exclusion criteria is the criteria of inclusion because of the following:
1. Infant 0-11 bulan.
2. Children who did not registred at the area.

The sampling technique was done by purposive method and accorded in to the criteria.

\[ n_i = \frac{N_i}{N} \times n \] (Moh. Nazir, 2003) (2)

Information:
\( n_i \) = sample size according to stratum
\( N_i \) = populationsize according to stratum
\( N \) = all population size
\( n \) = sample size

2.4. Data Collected Method
The method used in this study is the interview technique, used questionnaires:
Primary data include data on respondents identity, father's identity, children identity, family income and direct interviews with respondents using questionnaires containing a number of exclusive breastfeeding questions and diet. Exclusive breastfeeding grading was assessed by questionnaires that asked for colostrum and the first history of feeding the child at birth. Diet record is assessed by questionnaires that ask about age given a distraction, the frequency of eating in a day, the portion of food, the variation of eating and how to feed.

Anthropometric measurements used a TB / U index collected by the investigators, including
stunting and under-five children who did not have stunting (normal). Secondary data is obtained from documents contained in Lima Puluh Community Health Centre, Posyandu documents, as well as nutrition section of health office documents, and library searches related to research and scientific nature. Secondary data taken is picture of research location, number of child population of balita and data of population at research location.

2.5. Validity dan Reability
To determine the visibility of the questionnaire is done the test of accuracy (validity) and accuracy test (reliability).

2.6. Research Variable
1. Dependent variable is stunting.
2. Independent variable is exclusive breastfeeding and food pattern.

2.7. Data Processing
Data processing conducted in this study include:
1. Editing data
2. Coding data
3. Entry data
4. Tabulation data

2.8. Analysis Data
Data analysis used in this research is univariate analysis and bivariate analysis. Univariate analysis is used to describe the description of distribution and frequency both on independent variable and dependent variable while bivariate analysis to see the relation between independent variable with dependent variable by using chi-square and Odd Ratio (OR) analysis to know risk level in case group and group control. Significant test in this research was used significant limit value $\alpha$ (alpha) = 0.05 and 95% Confidence Interval (CI). Data analysis using SPSS 17 for Windows.

3. RESULTS AND DISCUSSION
Table 1. Distribution of Giving Exclusive breastfeeding Relationships To Stunting Children Under Five Years With Stunting Puskesmas Limapuluh Pekanbaru

<table>
<thead>
<tr>
<th>Giving Exclusive breastfeeding</th>
<th>Stunting</th>
<th>No stunting</th>
<th>Total</th>
<th>OR (CI 95%)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>No Exclusive breastfeeding</td>
<td>42</td>
<td>63.6</td>
<td>24</td>
<td>36.4</td>
<td>60</td>
</tr>
<tr>
<td>Exclusive breastfeeding</td>
<td>18</td>
<td>33.3</td>
<td>36</td>
<td>66.7</td>
<td>60</td>
</tr>
<tr>
<td>Jumlah</td>
<td>60</td>
<td>100</td>
<td>60</td>
<td>100</td>
<td>120</td>
</tr>
</tbody>
</table>

Table 1 shown that children excluded from breastfeeding exclusively during the first 6 months were higher in the stunting group (63.6%) than in the non-stunting group (36.4%).
The result of statistical analysis of relation of Exclusive Breastfeeding with stunting event obtained p value = 0.002, so it can be concluded there is relation between giving Exclusive Asi with stunting incident in children under five. The results obtained with the analysis of OR = 3.500, which means children under five who are not given Exclusive breastfeeding with 3.5 times the risk of stunting compared with children who get Exclusive Breastfeeding.

To measure the risk of stunting in children under five who are not given Exclusive breastfeeding using the formula Attributable Risk (AR):

\[
AR = \frac{(\text{OR}-1)}{\text{ATAU}} \times 100\
\]

Keterangan:
ATAU = rasio odds (2.444)
\[
AR = \frac{(3,5-1)}{3,5} \times 100\% = 71,42\%
\]

Based on the above formula obtained the value of AR = 71.42% which means that the amount of risk of stunting in children under five who are not given Exclusive breastfeeding is 71.42%.

These results are in line with the Fikadu study, et al. (2014) in South Ethiopia showing that under-five children exclusively breastfed during the first 6 months had a greater risk of stunting events.

The results of field interviews found that children under five who suffer stunting at the time of birth are not directly given breast milk but given formula milk for reasons of breast milk does not come out. The respondent mother also did not give colostrum (first breast milk out) with the reason that the first milk out is dirty or stale milk because yellow cloudy. In addition, if the milk is out but the number is small, the mother keeps giving formula milk or finely ground food with the reason the baby continues to cry because of hunger, so if the baby has been given food then the baby will calm down and sleep more soundly.

The recommendation from The American Dietetic Association (ADA) and The American Academy of Pediatrics (AAP) is for breastfeeding to be exclusively given to infants for the first 6 months and then continued with a minimum of up to 12 months of breastfeeding (Trahms & McKean, 2004)

Breast milk has many benefits, such as increasing the immunity of children against illness, ear infections, lowering the frequency of diarrhea, chronic constipation and so on (Henningham and McGregor, 2009). Lack of breastfeeding and early delivery of MP-ASI may increase the risk of stunting especially early in life (Adair and Guilkey, 1997).

The magnitude of the effect of exclusive breastfeeding on the child's nutritional status makes the WHO recommends to apply breastfeeding improvement interventions during the first 6 months as a step towards achieving WHO Global Nutrition Target 2025 on reducing stunting rates in children under five years (WHO, 2014).

<table>
<thead>
<tr>
<th>Diet</th>
<th>Stunting</th>
<th>No stunting</th>
<th>Total</th>
<th>OR</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2 Distribution and frequency of food dietary from stunting children shown that under-five children were significantly higher in the stunting group (62.1%) than in the non-stunting group (37.9%). Chi Square test showed that there is no relationship between diet with stunting event (p value = 0.201) with value of OR = 1.909, so diet variable is not a risk factor causing stunting. This study was not in line with previous studies explaining the relationship between diet and nutritional status of stunting (p = 0.040) and OR 3.3, the results explain that children with diets less risky 3 times higher to be stunting (Murage K, et al, 2010). Similarly, the results of research conducted Rahmayana, et al (2014) on the relationship between diet with nutritional status showed a significant relationship (p <0.001) and OR 6.01.

Allegedly there are other causes of children experiencing stunting in nutritional intake. According to Adriani et al, (2014) lack of micronutrients such as vitamin A and zinc, the role of vitamin A in growth is retinoic acid has an effect on hormones that control growth, especially the growth of skeletal tissue. The study of Fuada et al (2010), obtained by children under five with inadequate protein intake (<80% energy sufficiency) is at risk of short of 0.94% (OR = 94 CI 95%; 0.82-1.07). Research in Brazil proves that children with less eating or consuming protein intake below the average nutritional adequacy per day, 1.5 times greater risk of stunting (p = 0.004). From this study it is also known that children with fat intake below average daily consumption had a 2 (1.98) greater risk of stunting (p <0.001) (Assis A, et al, 2004). While in Latin American research, the relationship between malnutrition and non-malnutrition experienced a rapid change in diet and physical activity in schoolchildren (Duran P, et al 2006).

3. CONCLUSION

This study concludes there is a relationship of Exclusive breastfeeding with stunting incident in children under five. Childrens who were not given Exclusive breastfeeding with a risk of 3.5 times stunting compared with children who received Exclusive breastfeeding and the risk of stunting in children under five who are not given Exclusive Asi is 71.42%. As for dietary variables were not found to be associated with the incidence of stunting in children under five.

Based on the results of research and data analysis that has been done then can be monitored to pregnant and lactating mothers in order to provide exclusive ation in accordance with applicable provisions, because the exclusive ation associated with stunting events that can negatively impact future generations.

The related offices through posyandu are expected to also provide assistance and counseling to pregnant and nursing mothers about the importance of exclusive giving so that will grow awareness for exclusive breastfeeding.

The Government can also create new policies that support the exclusive breastfeeding aims to increase the coverage of Exclusive Breastmilk so as to create a generation of healthier and better future generations.
4. ACKNOWLEDGEMENT

In this opportunity the writer would like to extend her grateful thanks to the various parties who have helped in the implementation of this research and paper to:

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8. The cadres of Public Health Center Limapuluh, for information, the time, energy and all the help that has been devoted to this research.
9. Respondents who have taken the time and become part of this research
10. Friends at the Faculty of Public Health, a community nutrition program who has provided advice and opinions through lengthy discussions
11. Dear friends who have taken the time and have been willing to be part of this research

The writer realizes that this paper is still far from being perfect because of her limited ability, knowledge and references of literature, however, the writer hopes that it will be of some value to the readers, and she hopes suggestions and criticisms.

5. REFERENCES


SITUATIONAL ANALYSIS OF NON-COMMUNICABLE DISEASE PROBLEMS IN JAKARTA, 2015-2016

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ABSTRACT

Background: Non-communicable diseases (NCDs) account for 70% of all deaths globally. Similar to other developing countries, NCDs in Indonesia are on the rise. Identifying and prioritizing NCD burden would help to streamline the NCD prevention and control strategies. This research is aimed to study the distribution and to prioritize NCDs in Jakarta, Indonesia 2015-2016.

Method: This situation analysis used descriptive design with quantitative and qualitative approaches. Quantitative component included review of various reports such as Health Profile Prov. DKI Jakarta 2015, DKI Jakarta Province Health Office, etc to identify various NCDs. Hanlon method was used to prioritize NCDs. Magnitude, and seriousness of NCDs and effectiveness of available solutions were used to rate and calculate priority scores.

Results: In Jakarta, hypertension (3.6%), diabetes mellitus (DM) (1.3%), cardiovascular diseases (0.4%), obesity (0.13%), detection of cervical (0.011%) and breast (0.2%) cancers were the common NCDs. There was a rise in the magnitude of NCD risk factors and NCDs from 2015-16. According to Hanlon method, screening for diabetes, cervical cancer detection, cardiovascular diseases, and breast cancer detection were the high priority NCD issues.

Conclusion: NCDs are the major public health problems in Jakarta, Indonesia and their magnitude increased from 2015-16. Screening for early detection and prompt management is needed for high priority NCDs such as diabetes, cardiovascular diseases, cervical and breast cancers. Training of healthcare workers and creating awareness in the community is needed. Ensuring availability of screening facilities at all the levels of public healthcare system (public health center, hospital, and Integrated Coaching Post / Pos Pembinaan Terpadu) should be considered to enhance the target population coverage.

Keywords: Jakarta, Non-communicable diseases, Situation analysis

1. INTRODUCTION

The development of health is essentially an effort undertaken by all Composers of the Indonesian Nation which aims to raise awareness, willingness, and healthy living ability for everyone to realize the highest degree of public health, as an investment for the development of human resources that are socially productive and economical. The success of health development is determined by continuity with the efforts that have been implemented in the previous period (Ministry of Health Strategic Plans, 2015). The current health development is
carried out through a variety of efforts that include: health efforts, health financing, human health resources, pharmaceutical preparations, health and food tools, health information management, and community empowerment. The overall effort is done by taking into account the dynamics of population, disease epidemiology, ecological and environmental changes, science and technology progress, and globalization and democratization with the spirit of partnership and cooperation across sectors. Emphasis is given to improving community behavior and independence as well as promotive and preventive efforts (Wibowo A, 2014).

The degree of public health globally in the early 2000s is still influenced by the high cost of health, environmental conditions such as imprinted air, unsafe water to drink and high levels of pollution and the effects of global warming that lead to uncertain climate change. Not only that, the conditions of non-communicable diseases associated with lifestyle, such as heart attacks, cancer, stroke and other diseases continue to increase (James F, 2006 in Ubra R, 2011).

Health problems in Indonesia are not only influenced by infectious diseases but also non-communicable diseases in Indonesia have a double burden (Ministry of Health RI Strategic Plans, 2010). Non-communicable diseases include cancer, stroke, heart disease, chronic obstructive pulmonary disease (Ministry of Health RI Strategic Plans, 2015). NCDs are the leading cause of death globally, killing more people each year. Of the 56 million global death in 2012 68% were due to NCDs. Almost three quarters of all NCD death, occur in low- and middle-income countries (WHO, 2014). And then global death in 2015, become 70% were due NCDs (WHO, 2016). In Indonesia, NCDs are estimated to account for 71% of total deaths in 2012 (WHO, 2014). Health problems at national level are also faced in DKI Jakarta Province and need to solve and get serious attention from stakeholders especially non-communicable diseases (RPJMD DKI Jakarta Province, 2013).

The initial description of the above health problems requires further analysis so that problem identification and priority issues are identified. This study to aims distribution of morbidity of non-communicable disease in DKI Jakarta Province in 2015-2016 and determine health problem priorities based on distribution of morbidity of non communicable disease.

2. METHODS

This situation analysis used descriptive design using quantitative and qualitative approaches. The sources and types of data required in the analysis of this situation are as follows:

1. Primary data:
   FGD / Brainstorming with Section representatives in prevention and control disease sector, Section of family health, Planning and budget Section and health information Section

2. Secondary Data:
   Secondary data is obtained by collecting data from recording and reporting such as Indonesia Health Profile 2015, Health Profile Prov. DKI Jakarta 2015, National Health Service and DKI Jakarta Province Health Office, Basic Health Research (Risksadas) 2013, Ministry of Health Strategic Plan, Annual Report of DKI Jakarta Province Health Office, report on the implementation of disease control and surveillance information, report on the results of the communicable disease and non-communicable disease sections program, and related cross-cutting reports.
Information or data obtained is processed by computerized using Microsoft Office program. Implementation of Situation Analysis begins in December 2016 until March 2017 which is located at the Provincial Health Office, DKI Jakarta. Data is presented in various forms according to the intent of delivery in the form graphics, tables and narratives.

The priority determination of the problem is done by Hanlon method. Like the other methods, Hanlon's method in the process initially uses brainstorming for determining value and weight. Each group of criteria is scored by scoring on a certain scale. Then the group of criteria assessment included in the formula and the results obtained the higher the value then that is the program priority intervention.

3. RESULTS AND DISCUSSION

3.1. Results

3.1.1. Hypertension
Hypertension is a state of a person in a state resistant to vigilance in the body against dangerous degenerative diseases, so if not addressed in the long term can cause complications of chronic diseases. The prevalence of hypertension cases in 2015 found in DKI Jakarta was 2.4% while in 2016 it increased to 3.6% (Health Office of DKI Jakarta Province, 2015-2016).

3.1.2. Diabetes Mellitus (DM)
DM is a metabolic disorder disease associated with insulin production problems. Factors cause more frequent because of poor lifestyle in eating less healthy foods. The case experienced in DKI Jakarta Province in 2015 with a prevalence of 0.9%, then increased to 1.3% in 2016 (Health Office of DKI Jakarta Province, 2015-2016).

3.1.3. Cardiovascular
Cardiovascular is the number one cause of death every time in the world and many die from this case before the age of 60 years. The disease is caused by hypertension, obesity. DM and hypertension are disease that is also caused by multifactor. The prevalence of cardiovascular cases in DKI Jakarta was 0.2%, increasing to 0.4% by 2016 (Health Office of DKI Jakarta Province, 2015-2016).

3.1.4. Cancer Detection (Cervical and Breast)
This disease is the leading cause of death after cardiovascular disease. Less attention from the community in making early detection so that can’t be overcome soon result in the worsening of illness suffered. The prevalence of cervical cancer cases based on Visual Inspection with Acetic Acid + (IVA+) in DKI Jakarta Province by 2015 is 0.005%, increasing to 0.011% in 2016. While the prevalence of cases of breast cancer (tumor) by 0.2%, increased to 0.4% in 2016 (Health Office of DKI Jakarta Province, 2015-2016).

3.1.5. Obesity
Obesity is caused by excessive consumption of carbohydrates and fats with little fiber consumption and rarely physical activity. The prevalence of obesity in DKI Province in 2015 was 0.06%, increasing to 0.13% by 2016 (Health Office of DKI Jakarta Province, 2015-2016).

3.1.5. Priority NCD Problem
After analysis of health problem of non-communicable disease, then the problem is measured used Hanlon Method by bureau staff of Health Office DKI Jakarta Province:

Table 1 Prioritizing Measurement with Hanlon Method

<table>
<thead>
<tr>
<th>Health Problem</th>
<th>Hanlon Component (2A+B1)</th>
<th>Rank</th>
</tr>
</thead>
</table>
Based on table, the priority health problem of non-communicable disease is DM with Hanlon Measurement Score is 448.

3.2. Discussion

DM is a chronic metabolic disease disorder caused by the pancreas not producing enough insulin or the body can not use effectively produced insulin. There are two main categories of DM: DM type 1 and type 2. Type 1 DM is characterized by a lack of insulin production. Type 2 diabetes, caused by the use of insulin less effective by the body. Type 2 diabetes accounts for 90% of all diabetes (Ministry of Health RI, 2014).

Figure 1 Prevalence of DM in Jakarta in 2015-2016

Based on the DM Prevalence in 2016 there was an increase of 1.45 times from 2015 to 2016 from 0.9% to 1.3%.

Figure 2 Several Proportion Risk Factor of DM in Jakarta in 2015-2016

From Integrated coaching post (Posbindu) data, in 2015 to 2016 there is an increase in the proportion of DM risk factors from they are visited, so it is directly proportional to the increasing prevalence of DM.
Prevalence of DM by age and gender, the number of DM patients in women is higher than men especially in child-bearing age, meaning that the proportion of risk factors of obesity is more experienced by women, if women of childbearing age are pregnant and have DM will experience complications during pregnancy and childbirth, Based on several studies mentioned if pregnant women with DM will experience complications including urinary tract infections, hypertension (chronic / preeclampsia / eclampsia), until the death of the mother.

Diabetes Mellitus (DM) is one non-communicable disease or also called chronic disease in which people with diabetes can not control the blood glucose levels. The function of the pancreas gland in a healthy body, easily release the hormone insulin in charge of transporting sugar through the blood to the muscles and other tissues for energy supplies. DM includes metabolic disturbances in the distribution of sugar present in the body (Irianto, 2014).

Sugar usually obtained from carbohydrates that are circulated throughout the body serves as a fuel used in daily body activities. If in a condition the body does not receive food intake, the sugar reserve in the liver is broken down and released into the bloodstream in place of energy from the food intake. However, if the body still needs additional sugar, the second reserve of fat and protein is forced to decompose into glucose. Diabetics can not produce enough insulin hormone or can not be used effectively result in excess sugar in the blood (Irianto, 2014).

There are two main categories of DM: DM type 1 and type 2. Type 1 DM is characterized by a lack of insulin production. Type 2 diabetes, caused by the ineffective use of insulin by the body. Type 2 diabetes accounts for 90% of all diabetes (MoH RI, 2014). Type 2 diabetes is caused by insulin hormone resistance because the amount of insulin receptors on the cell surface decreases even though the amount of insulin is not reduced so that glucose can not enter the insulin cells (Irianto, 2014).

According to World Health Organization (WHO) data, the number of people with diabetes has increased from 108 million in 1980 to 422 million by 2014 globally. The prevalence of diabetes in adults over 18 years increased from 4.7% in 1980 to 8.5% in 2014. Diabetic prevalence has increased faster in low- and low-income countries (WHO, 2016).

According to Delice (2003) in Nainggolan (2013) Indonesia, based on the WHO diabetes prevalence map in 2003 was ranked the 4th highest in the world after India, China and the United States for the number of DM cases. Results of Basic Health Research (Risksdas) 2007 found that the proportion of DM deaths in the age group 45-54 years, with urban areas ranked second by 14.7%, while rural areas ranked 6th, ie 5.8% (Nainggolan, 2013).
Results of Riskesdas 2013, an increase in DM prevalence from 2007 to 2013 was diagnosed by physicians or symptoms by 1.1% to 2.1%, of which the highest prevalence was in Central Sulawesi at 3.7%, North Sulawesi with 3.6%, South Sulawesi 3.4% and NTT 3.3%. From the results of these studies, it is estimated that only about 26.3% have been diagnosed DM. This means that there are still many people who have not been netted in the diagnosis and if not done early detection immediately, patients who have not been diagnosed slowly will occur serious complications, because that DM is called as one silent killer (Ministry of Health RI, 2014).

In addition to insulin resistance that acts as the cause of DM disease in pathogenesis, there are many other factors that play a role in disrupting the metabolism of insulin hormones in the blood thus increasing the risk of DM incidence. According to the Ministry of Health (2014) the factors that also play a role affect the body's metabolism, thus increasing the risk of DM is a risk factor that can be modified very closely with unhealthy lifestyles or lifestyles, such as excess weight, obesity, rare physical activity, hypertension, dyslipidemia, unbalanced diet, a history of impaired glucose tolerance (TGT) or impaired fasting blood sugar (impaired GDP) and smoking. While unmodified factors such as race, ethnicity, age, gender, family history of DM, birth history of infants weighing more than 4000 grams, and birth history with low birth weight less than 2500 grams. (Ministry of Health RI, 2014).

4. CONCLUSION

There public health problems of non-communicable disease, are DM, hypertension, obesity, detection of cervical cancer (IVA+) and breast cancer, and cardiovascular diseases. Based on health problem, the priority is DM with score 448. DM is the one of silent killer diseases, so public with the high risk in order to detect early health status especially for DM and control their risk factor of DM so that reduce risk of cases of DM in health facility, whether it is public health center, hospital, and Posbindu.

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INTRODUCTION

The practice of confinement after delivery is a traditional practice among the Malay-Indonesian, became a routine that will be focused to by each maternity mother. Therefore, define the term from Kamus Dewan, as postpartum something prohibited do so (according to custom or their belief), as a symbolic of custom and beliefs who inherited from generation to generation. History recorded that in according with the beliefs of the Malay-Indonesia, Personal care after delivery is very important to recovered the mother’s health during the time of pregnancy and delivery from various physical and mental. This is because the previous generation believes that when one woman lost a lot of blood during the delivery, then the method that the prohibition is necessary to ensure that a woman's body recovered from internal lesions during delivery. If they ignore the confinement period, it will happen a lot of health problems from the point of physical and mental, in turn, have a negative impact not only on the mother but also on the baby.

Belief in the rule of confinement is not just become a culture among the Malay-Indonesia only, but it is also a traditional cultural practice in different countries. Uniquely, the confinement period of Malay-Indonesia is within 44 days to 100 days have samely with foreign countries, like Mexico, Netherlands and United States of America. The visible difference is from the methods point of practice and care throughout the duration of the treatment. Generally, women in the Malay-Indonesian region are confronted with certain methods in the process of treating, purifying and recovering their bodies. While women in such rural Mexico only needs to rest for some period in the room without being allowed to bath for a few days. For women in the Netherlands, the mother get all the intensive care after delivery when they have and need to confinement at home. Depending on the birth, intensive care from a qualified nurse to help mothers in manage their self and the newborn baby during the confinement period physically or emotionally. Nurses also act as the liaison between mother and baby as well as their doctors. Postpartum nurse on duty will also clean the bathroom, toilet, mother room, and baby rooms to ensure that household condition and the environment very clean. They also help to ease the burden of the deceased's mother with help them to solve all the house chores so the mothers can be rested and recovered completely. The nurses “after delivery” will also meet with the mother during the eight-month period of pregnancy to discuss specific needs, and organize all requirements as needed after birth. Most
of the mothers get 49 hours care in confinement after delivery. If in the United States, the method of care in the confinement period is short, when the women was taken care of by her mother during the confinement period. Traditional practices of confinement for 44 days this will be a little difficult without the help of someone. So, some traditionally confinement practices are still followed by Malay-Indonesian women, but there are also have to change it and make sure it relevant and convenient with the lifestyles nowadays.

In addition, despite the differences in terms of care in the treatment of confinement, most women who undergo the confinement process have been normally discharged from social roles, both within the domestic nor the public. Women who work in the public and private sectors are given maternity leave whose the duration depend on countries and sectors. After a period of confinement, they believed that they were already able to perform the duties and responsibilities very well.

2. TRADITIONALLY CONFINEMENT CARE AFTER DELIVERY FOR WOMEN MALAY-INDONESIA: AN OVERVIEW

Generally, Malay traditional treatment and care after childbirth have been practice many years by Malay-Women in Malaysia and Indonesia. Malay traditional treatment includes physical, recruitment and the use of herbs, based on their beliefs, knowledge, and practices related to the well-being of life within the community. All components are intended to prevent, treat and care for the health. Practices and care in the treatment of a traditional Malay confinement is an intellectual branch of traditional medicine and not the big matter for the communities in Malaysia and Indonesia. Such as the Orang Asli community, the new mother needs to soak in salt water for a certain period, then herbal ingredients of turmeric (Curcuma longa L.) and manjakani (Quercus infectoria G. Olivier) will be applied to the woman's confinement. For the Chinese, the care after delivery was done by Pui Yit. The role of Pui Yit is similar to the midwife rule. They did not allowed to wash their hair for bath within one month in order to avoid the entry of evil wind into the body.

According to the World Health Organization (WHO), the period of delivery begins about an hour after the placenta comes out. For traditional medicine, every treatment and care will start from the first day of delivery until at least for the next 40 days. This period is also called a period of confinement and is believed to be equivalent to the duration of the mother having nifas blood or lokia. According to the Malays belief, during this period, the mothers and babies is exposed to the dangerous of disruption of the delicate creatures and so on.
Therefore, during the confinement period, the mother should take various precautions through the set of post-natal and Malay care treatment after delivery. These practices will done together with the midwife or a guide from them. A hundred percent recovery is expected to be reached after 100 days of confinement.

Malay confinement practices based on several elements which is the uses of herbs for health and its become the main factors of the internal care after delivery. A variety of herbs can be eaten or applied topically in the form of fresh or dry. Among the herbs used are flowers, roots, and the herbal extracts used as capsules. Some herbs are pounded and applied to the entire body or in certain parts of the abdomen to promote blood circulation, in the forehead to get rid of wind and prevent headaches after childbirth due to lack of sleep.

The care of women condition after giving birth to a baby among the Malay-Indonesia society is very important thing to focuses up. This can causes a woman to become “cold”. The use of herbs is an important things in the postpartum of Malay maternity aspect after childbirth. Herbs are used in various ways during confinement like as a mother's bath ingredients, sweets, and extra drinks herbs. Types of often used herbs are among the members of the Zingiberaceae family. Generally, it is used as an ingredient in dishes other than known as the plant of medicine, as well as ornamental plants. One of the species that is very popular is the ginger. Ginger is one of the many Zingiberaceae families that turned out with many benefits. Thus, the tradition passed down through generations as ordered, bertungku, berbengkung, refreshing the mother with herbal bath water, and consuming herbal medicine herbs on average use of the family Zingiberaceae. Among the parts of the plant herbs used are the leaves, stems, tubers, roots, and rhizomes.

Besides that, there is a community especially mothers who are still fresh and healthy body although giving birth to ten children. This is due to their diligent care in maintaining the practice of confinement after each birth without leaving or breaking the rules. This practice is synonym amongst mothers because they are confident that the confinement was able to restore their vitality and the body and also can accelerate the healing process of maternity wounds. It can be shown that mothers who diligently keep in maintaining traditionally confinement practices will be fully recovered and will be more fresh, slim and energetic like the time before pregnancy (pre-pregnancy). Malaysia and Indonesia are one of the mega biodiversity countries which is rich in flora and fauna species. The wealth of natural resources has provided a source of traditional medicine to the Malays and various tribes in the country.

The diversity of ethnic groups in the Malay community as Minang, Java and Malay
have further enriched the Malay culture of practice. Therefore, the practices common to traditional Malay confinement treatment are also influenced by the cultural in a particular area. However, these practices have the same purpose of recovering, maintaining maternal health after delivery and prevent any health problems in the future.

2.1 Bertungku

*Bertungku* is a form of sequence on the outside of the womb area by using ballast such as river rock or iron that’s having a smooth surface and flat or round shaped and its used as a tool of *bertungku*. The furnace are heated and will be wrapped with a thick cloth and overlaid with the leaves of certain herbs like leaves *mengkudu* (*Morinda citrifolia L.*), leaf lemuni (*Vitex trifolia L.*), sireh (*Piper betle L.*), pandanus leaves, turmeric, galangal and Lemongrass leaves. Then the furnace will be settled slowly on the womb part. In addition, to removing the fragrant odor from the herbs, it was also be able to calm the mother during *bertungku*. *Bertungku* was started in the first two weeks after childbirth for one hour and usually did it in the morning or evening. The practice of *bertungku* is also believed that can help heal the uterus, and organ swelling due to maternity, breaking the fat, beautifying the skin of the abdomen, helps bloodstream, windthrow, as well as the fastening of healing. In addition, *bertungku* can also dispose of a wind in the contract the womb, the uterus and remove the clotted blood. Blood and mucus (*lokia*) should flow out over the period of 44 days of abstinence following the beliefs of the Malay people. The womb will not be completely clean if the blood stops early and the health of the woman will be threatened. During the *bertungku* process, the womb is also swollen upward to prevent the fallen womb and tombong disease in the future (old age). In addition, for women who give birth through the *caesarian*, *bertungku* also needs to be done and only justified on the area of the thigh, ankle, and back of the body only to help strengthen the uterus and pelvic floor muscles but not come within the abdomen.

2.2 Herbaceous Baths

For the mother off maternity, they will bath using the water decoction of herbs that have a certain smell like some of the herbs fragrant and is believed to have a magical power to be feared by the ghost. Among herbaceous herbs used as a herb water bath is *jerangau* (*Acorus calamus L.*), lime (*Citrus Medica*), *jambu batu* leaves (*Guava guajava L.*) and *pandan* leaf (*Pandanus amaryllifolius leaf Roxb.*), henna leaves, *serai wangi*, *kenanga*, *mengkudu* leaf, galangal leaves, *kantan* flower and *sireh* to cleanse the body, refreshing, restoring energy and eliminate body odor. The bathing water will be boiled and mixed with herbs. Then, water is mixed with cool water before bathing. The means of treatments for mothers who give birth via “*caesarian*” usually begins slowly a little than childbirth through *faraj*. Bathing with the
decoction of herbs justified a few days after giving birth via caesarian. The use of the bengkung (after giving birth via caesarian) needs to be initiated when the stitches began to dry so that the muscles of the abdomen are not slacked and will not make the stomach continues to flabby.

According to the belief of Bajau in Sabah, women after giving birth and still have been strictly prohibited to bathing herbal bath either or common bath. This is because, according to their faith, with the tub body mothers still confinement could easily in wind and expand all the veins. They just wipe the body only during the 44 days confinement. However, no precise scientific facts to allow this statement because it is according to the racial beliefs.

2.3 Massage

A massage is a basic practice in a set of Malay traditional treatment and care after delivery. With the aim to launch the blood circulation through the muscles, helps the production of dirty blood, wind, and dirty slime. Massage can also help produce better quality milk and can increase the quantity of plasma oksitosin in the milk. In addition, through the method incorrectly, indirectly, can calm the emotions, get rid of the feeling of lethargy and relax the muscle tension. Typically, the basic materials used for massaging made of coconut oil cooked with a mixture of herbs and roots and functions as a lubricant. One of the reasons the need massaging for women after childbirth is to womb from sagging and falling in addition to making a new mother feel more fresh, healthy and emotionally controlled.

According to tradition, a new maternity Malay women are advised with at least three consecutive days; or at least six to seven times during the confinement period. Accordance with Anisah, Datin Sharifah, founder of Nona Roguy and author the book the encyclopedia of Midwifery, the post-natal massages can be routine blood, removing trapped and stagnant blood and raise the uterus. It also can increase breast milk, helps burn fat and break it down in the body, help form back the mother’s body back to the original body shapes as well as speed up the recovery process of the uterus as a whole after work hard birth.

2.4 Wearing Bengkung

In addition, one of the traditional tips and secrets from the ancestors of Malay-Indonesia in order to make the body will remain slimmer is to wear the bengkung or berbarut per day for the past 44 days, at least 12 hours a day. During pregnancy, the mother's stomach will expand and tense due to the growth of the baby and after undergoing the process of birth, the mother's stomach expands are so flabby and flaccid. For retrieving form of body lean, bengkung shall apply during the period of confinement. Bengkung will also help shrink the
uterus, flatten the stomach, promote correct body posture during breast-feeding and to avoid eating and excessive drinking. The bengkung is usually made of thick cloth and has a rope to tie the bengkung aloud and neat. Before the mother wearing the bengkung, herbal ingredients referred to abdominal rubbed in advance on the belly. Abdominal work to increase the impact of the use of the bengkung which deflate the stomach. Among the ingredients are often used to make the abdominal is lime juice (Citrus Medica) or asam jawa juice (Tamarindus indica L.), Ginger (Zingiber officinale Roscoe), turmeric (Cucurma longa L.) leaf, sireh (Piper betel L.), and garlic (Allium sativum L).

All traditional during confinement was special creating for strengthening reproductive organs, especially the womb, stomach muscles and pelvic floor muscles. It is believed that all the treatment and confinement at least 44 today is to ensure that new mothers will give birth to stay healthy physically, mentally and continue to be active in terms of sexual even after menopause. Young mothers who don't abstain and do not follow the traditional way of treatment after delivery are believed to have problems like prolapse relaxation of the womb, bladder and various types of gynecologist especially when they increased age and less comfort when in relation to double. Among the tips found in this manuscript (MSS 1653):

“jika faraj perempuan selalu berbau busuk selepas melahirkan, maka hendaklah dicari celatang ayam putih dan kapur barus kemudian digiling lumat-lumat dengan air madu baharulah disapukan kepada zakar suami dan terus bersetubuh dengannya الله يشأ أن يحارم قربى farajnya”.

2.5 Food And Drink

During the confinement period for 44 days, the mother should also adopt certain rules which includes things to do and also not to do. This resulting rules based on experiences of the Malays previously provided orally. No matter whether in the city or in the village area, it is still practiced by the Malay community. In society, the mother in the confinement period is encouraged to eat hot food-related and are prohibited from consuming food sort of cool. Classification of food-related cold and warm predictable nutritional value based on which food cold-related more to foods that have a lot of water content, less protein, low fat, low carbohydrate, and low calories. According to the understanding of the Malay community. most of the vegetables and fruits are sort of cool. Among the recommended herbal food is like eating white rice with ginger or black pepper and dried fish. The function of ginger and black pepper is to heat the body and expel wind in the body during the confinement period. Hot herbal food intake is encouraged to increase from sweat and launch the blood circulation. Excessive sweating is the best way to remove all the water accumulated in the body during
the confinement period. During the confinement period as well, mothers are not allowed to drink too much water to avoid the stomach from becoming bloated and frequent urinating because at the time of confinement of the uterus should not be too wet. This is to speed up the healing process of the uterus and to avoid from smelling. Mothers confinement also are not allowed to drink water (ice) because it is believed to be able to relax the muscles of the stomach and cause belly.

In addition, the mother also is prohibited from consuming food which can cause itching such as seafood. The various prohibitions and guidance they should observe during the confinement period as if too much movement. This is because if the toe bumping into with sense it would render bentan; which is a condition in which the body becomes very weak and shaking. When this happens, it will take a long time to recover. This may be related to the fact that foot reflexology treatment area is the area that functions controlling uterine health.

Some women may suffer from a backache after delivery, especially after going through a long and difficult labor. Toning and abdominal and pelvic floor muscles reduce a backache. Some traditional treatments are recommended for this purpose. Firstly, boil some ginger slices in water, adding a little coarse salt and sugar and the decode, drunk every morning and evening. Besides that, they can take of makjun or jamu. use of bengkung helps reduce a backache or bertungku.

3. HERBAL OR PLANTS THAT ARE REPRESENTED AND USED IN WOMEN'S CARE BASED ON MANUSCRIPTS

3.1 Medicines For Young Women Delivery

1) Ambil daun pilis dan buah kapas yang muda maka pipis ambil airnya maka lumurkan pada ari-ari afiat olehnya.

3.2 Ubat Meroyan Beranak

1) Ambil airnya sebahagi maka bubuh minyak lang maka minum afiat olehnya.

3.3 Restoring Bikir. (The meaning of bikir is virginity)

1) Setengah daripada petuanya untuk menyempitkan faraj kemaluan perempuan yang luas mahulah dicari lengkuas digiling lumat-lumat dengan cuka kemudian diminum
pada tiap-tiap pagi selama tiga hari serta disapukan pada ari-ari dan punggungnya
mujarab boleh mengembalikan bikirnya semula.

3.4 How To Make Makjun/Jamu That Can Cure Vagina

1) Khasiatnya pertama ambil cabai berat empat kisar dan pala satu kisar dan bawang besar-besar tiga kisar cengkhih dsn kepulak satu kisar dan cengkhih satu kisar dan lada sulah tiga kisar dan biji sawi satu kisar dan kulit buah kedaki kelang tiga kisar dan sunti buah lapan kisar dan jant hitam tengah enam kisar dan biji ganja dengan bunganya tengah tiga kisar dan jemuju dua kisar dan lengkuas cina lima kisar dan adas mnis lima kisar akar qurha tiga kisar dan kepulak jin tiga kisar dan buah kedaki enam kisar maka semuanya campurkan maka pudi lumat-lumat setelah sudah maka seraki setelah sudah maka ambil minyak lang dan air madu itu sama beratnya dengan sekalian pudi itu setelah sudah campurkan maka baru jadikan makjun tatkala makan dia itu belum makan nasi.

3.5 Berbuat makjun hangat sarir dan sekaliannya penyakit pun sembuh olehnya jika perempuan tiada beranak olehnya jadi beranak olehnya

1) ambil bunga lawang dan buah pala dan kulit manis cina dan bawang pala dan lada sulah dan cabai dan sunti halia dan kedaki sekaliannya itu berat sekurang-kurang dan kedaki sepuluh kupang dan buah melaka sepuluh kupang dan jemuju tujuh kupang dan lengkuas padi lima kupang dan jint hitam empat puluh kupang komakoma sekupang dan umbar sekupang dan biji maut lima kupang dan dan kasturi sebusaq dan pejami sebusaq dan kemukas lima kupang dan gaharu tenga kalam lima kupang dan akar sangkaduk lima kupang dan ___ sepuluh kupang maka direndang setelah sudah maka dipipis lumat-lumat maka seraki maka ___ kan makjun maka dimakan pagi-pagi belum makan nasi.

3.6 Ubat Berbika Sarir Perempuan Yang Perair Atau Busuk

1) Ambil pulut hitam maka rendang maka tepung maka ambil lempeng padi dan buah pala sebuah dan sunti halia dan damar putih dan halia mentah sehiris maka dipipis semuanya lumat-lumat bubuh lada pudi akan airnya limau kapas maka campurkan dengan tepung itu maka ketika tatkala hendak makan dia hancur dengan air mentah maka minum tiga pagi mujarab olehnya.

2) Ambil manjakani dan gaharu dan cendana dan minyak bijan maka minum tiga pagi mujarab olehnya.
3.7 Ubat Berbika Sarir Perempuan Yang Luas Lubangnya Atau Air

1) Ambil pulut hitam pipis lumat-lumat maka bubuh lada pudi dan halia dan jemuju dan lempoyang dan buah pala dan kunyit dan mutu sebiji dan air limau kapas pipis lumat-lumat maka ketika bulat-bulat setengah ditelan setengah dimasukkan kedalam farajnya jadi sempit olehnya.

3.8 Mujarab Ubat Meroyan

1) Diambil daun mengkudu serta serbuk papan keranda kanak-kanak yang mati ditumbuk kedua-duanya sehingga lumat betul-betul dibancuh dengan sedikit air Códi / kopi baik kemudian dilumurkan pada segala badannya daun ara lempung ditumbuk dengan serbuk papan orang mati kemudian dibancuh dengan air boleh juga dilumurkan keseluruh badannya.

4. THE IMPORTANCE OF JAMU FOR WOMEN

To get the body back to slim and look more radiant, the women practiced eating herbs or juice from herbs such as turmeric juice that helps restore womb system during confinement. After the maternity process, it was time for the womb to undergo "recovery" from maternity wounds. The mothers have to undergo a self-cleansing process for 44 days of confinement and that is why they created herbal medicine (Jamu) to speed up the process of restoring the womb, increasing appetite, stopping too much blood, launch blood circulation, strengthening the veins on the feet and hands after going through every process during pregnant until the birth. The herbs used in producing Jamu also an important component in the aspects of Malay midwifery. Herbal medicine or (Jah-moo) is a famous traditional medicine among the Malay community primarily in Indonesia. Herbal medicine or traditional medicine is based on the herb ingredients of plants, animals, minerals, preparations material of galenic, or a mixture of those substances that are passed down through generations that have been used for long term medicines. The material of galenic preparations are the result of extracts from some materials or a mixture of materials derived from plants and animals.

In the manufacture of Jamu, plants in the original form are used, they are not purified through the process of extraction. The Malay community tends to mix some herbs into one ingredient because they believe the mixture of herbs can improve the effectiveness cure of the treatment. Hence, there are many herbal products are produced using a mix of various medicinal plants. Herbs or herbal mixture that has been used as herbal medicine used by
midwife along with certain practices and certain method in treating disease and heal wounds delivery. The herbs used are intended to assist in recovering and preventing any health problems in the future, especially after several births. According to a studies conducted by Kuala Lumpur Medical Research Institute, ten species of plants that commonly used in Malay-Indonesian pregnancies such as turmeric, galangal, ginger, serai wangi, mengkudu, kayu manis, pandan wangi, key lime, manjakani and cekur. In addition, herbs that are commonly used in Malay midwifery and herbal medicine ingredients are mostly known publicly their properties. *Jamu* is made in the form of capsules or powder or in the form of fist. *Jamu* are consumed in order to preserve the internal and external problems of women health before or after delivery as well as being able to treat a certain illnesses based on the experiences by previous generations. The use of herbal medicines for women during the period of confinement after delivery is strongly emphasized in order to shrink the womb from within. Therefore, the main function of consuming *jamu* is to warm up the body and comfort the body. *Jamu* also plays a certain role and have its own nutritional value in the period. But for mothers who breast-feed their baby, those who consuming *jamu* would interfere with breastfeeding. This can cause the baby to get diarrhea effect of the *Jamu*.

This herbal medicine has long been known in Indonesia because most of the women there have the highest percentage of practicing *jamu*, especially from herbs *Kacip Fatimah*. *Kacip Fatimah* traditionally used to maintain a healthy system of womb women and help tighten the womb part and to enhance sexual function. *Kacip Fatimah* is rich with *phytoestrogen* and *isoflavones* which can relieve the symptoms of menopause. In Malaysia, *kacip fatimah* is also known as "Fatimah Selusuh" (literally as medicine maternity Fatimah). Between the method used previously in the Malay community in how return virgin after childbirth is to practice drinking herbal beverage such as turmeric juice, herbal medicine from herbs such as *kacip fatimah*, *manjakani*, *akar serapat*, *galangal*, ginger, *cekur* and so on. The extraction of turmeric juice can be take immediately after delivery for three consecutive days in the first week to dry the stitches in the abdomen. Turmeric is an anti-bacterial herb and can help to reduce the risk of infection of the stitches. Some of the tips to narrow down the vagina or the genital female wide according to the manuscripts MSS 1653:

*mahulah dicari lengkuas dan digiling lumat-lumat dengan cuka kemudian diminum pada setiap pagi selama tiga hari berturut-turut serta disapukan juga pada ari-ari dan punggungnya ان شاء الله mujarab dan boleh mengembalikan bikir nya semula.*

Traditional practice or knowledge is also one of the factors that can contribute to the development of herbal products such as *jamu* that have the potential to be commercialised.
The frequent use of herbs based on manuscripts in traditional medicine can be used as evidence of the efficacy of these plants in curing a disease.

5. CONCLUSION

New women's previous delivery will normally be strives to take good care of themselves in compliance with the current practice of confinement as recommended by the culture and practices of several generations of their families. Most of the culture and societies acknowledges the potential of damage to the woman's body as a result of pregnancy and delivery the process. Confinement practices are also supported by modern research, where they acknowledge that all herbal dietary habits will help and accelerate the healing process after delivery. The validity of the use of herbs that can heal the wound childbirth without side effect to the mother or baby become important indicators to society. Traditional knowledge of herbs and medicinal plants as well as use in many post-natal confinement care also form the basis of important to elevate back manner and confinement practices Malay community. Nevertheless, the proving of the goodness of the use of herbs, especially among the Zingiberaceae family during confinement should be extended so that the community can see its own effectiveness in giving a good impact to the mother after giving birth to a baby. This is because it is the medicinal plants that have potential in treating maternity wounds besides being used as an ingredient in producing jamu. Indirectly, this shows that there is still a dependence on confinement treatment Melayu-Indonesia tradition and consume jamu nowaday, although the progress in terms of modern medicine is growing rapidly.

However, looking at the impact of development that has impacts on local socio-cultures, these practices are feared to be marginalized especially for young people. Through continuous practice, the intrinsic value of traditional knowledge including the value of intellectual, educational, social, economic and scientific can be recognized and certified that the system of knowledge in the treatment of confinement traditionally is the framework of the continuous innovation that benefits to all women. Therefore, knowledge of the traditional confinement should be preserved, documented and continued practice in line with efforts to enhance the value of traditional Malay so as not to become extinct in the tide of modernity.

6. ACKNOWLEDGEMENT

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Scientific Research Towards Dengue Protease.

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MSS 1653

MSS 2502

Kamus Dewan


Zaharah Hasan, Beauty Is Beyond Skin Deep Traditional Treatments For Women, MARDI.


Effectiveness implementation of Community-based On Integrated Management of Childhood Illness for reducing Children Mortality : A review of the Literature

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ABSTRACT

The newborn child will die before reaching his or her fifth birthday. Under five ages is a leading indicator of child health status and overall development in countries. The way to solve that problem is implementation of Integrated Management of Childhood Illness which then develops to be Community-based on Integrated Management of Childhood Illness (C-IMCI). The purpose of this paper to view the effectiveness implementation of Community-based on integrated management of childhood in reducing child mortality. This study was complemented with systematic literature review by review of relevant books, scientific article and reports in literature department with focus on developing countries. The implementation of C-IMCI has decreased child mortality rate under 5 years quite far in the last 2 years that is 27/1000 live birth. The achievement of child mortality under 5 years since the implementation of C-IMCI or MTBS-M almost reached the target of SDGs that is 25/1000 live birth. Seeing the decrease in under five mortality rate by 2015 it is proven that MTBS-M is effectively applied in health services. The MTBS approach is well suited to developing countries in efforts to reduce mortality, morbidity and disability in infants and toddlers.

Keywords: Effectiveness, Implementation, Children, Mortality, C-IMCI

INTRODUCTION

The degree of public health can be assessed by several indicators that may reflect a particular condition. One indicator the degree of health is the mortality rate infants and toddlers. In addition to describing health status, the indicator is also used to assess the success of health services in health development programs (Ministry of Health, 2013).

More than 5.9 million children per year die before the age of 5 in developing countries due to complications of preterm birth, pneumonia, intra partum complications, diarrhea and congenital caries (WHO, 2014). In Indonesia 150,000 Basic Health Research in 2007 mentioned the cause of death of children is ARI with national prevalence of 25.5% and the cause of illness of children aged under five years is pneumonia with prevalence of 3% (Ministry of Health, 2010).

By 2015 the MDGs have ended but the achievement of the decline in child mortality under 5 years remains to be continued in accordance with one of the Sustainable Development Goals
SDGs) target of ensuring a healthy life and encouraging the welfare of all people of all ages, where one of the indicators is reducing the AKN by 12/1000 live births and IMR by 25/1000 live births (WHO, 2014).

Research on IMCI has been undertaken in other States with respect to achieving the objectives of IMCI. Research conducted in Tanzania shows the effectiveness of IMCI in reducing child mortality under 5 years. This study compares two areas that initially had the same child mortality rate. Further IMCI is applied to one region, after 2 years of IMCI implementation resulted in decrease of child mortality rate under 5 years 13% lower than area that do not apply IMCI. There was also a difference in mortality rates of about 3-8 / 1000 live births (Schellenberg, 2004).

It has been generally pointed out that MTBS is effective in reducing child mortality under 5 years, but the Indonesian Demographic and Health Survey reports that as many as 15 out of 33 provinces in Indonesia have an AKB higher than the national average of around 42/1000 live birth in Riau Islands Province then 115/1000 live birth in Papua Province. One cause of the high mortality rate of children under 5 years old in some areas in Indonesia is caused by the difficulty of access to health services (Suemasu, 2015).

According to routine report data collected from provincial health offices throughout Indonesia at the National Meeting of Children Health Program, The number of puskesmas that implemented IMCI until the end of 2009 amounted to 51.55% (Nakagawa, 2015).

Research conducted in West Java stated that the cause is still lack of application of IMCI is a shortage of trained health workers in IMCI. The results of this study reported that only 43% of healthcare services had health workers receiving IMCI training and 40% during the training period. Another contributing factor is that only 19% of primary health care have all essential medicines and equipment for IMCI and lack of supervision from district health office staff and low public awareness of the importance of MTBS are also reported as factors affecting the application of IMCI (Fomin, 2014).

2. METHODS

Effectiveness C-IMCI on the reduction of under-five mortality rate based on studies that have been done with literature review approach. The literature search began on September 1, 2016 by searching electronic data. In the early stages, search the journal using ProQuest, Google scholars, EBSCO, and Science direct. The method of searching by using the specific keyword "C-IMCI" "AND" pediatric mortality. "The journal is selected according to the year, title and abstract The selected journal is published from 2000 to 2016. Journals that are irrelevant to
the topic of research will be eliminated.
In this study the journal was selected based on the inclusion criteria. Only English-language journals and describes the effectiveness of integrated management of community-based children in reducing under-five mortality

3. RESULTS AND DISCUSSION

3.1 Result
Integrated Management of Childhood Illness (MCI) is a strategy established to reduce mortality and morbidity in children in developing countries (Rowe et al., 2008). Implementation of IMCI has been ongoing, but still not able to reach MDGs targets. This is due to several obstacles that health services still have many health workers who have not been trained due to IMCI officers who have been trained rotated to other health services, consequently not all sick children handled with IMCI. In addition, the limited facilities of IMCI services are made into one room with KIA services so that inspection is less conducive (Firdaus, Sugiro & Mawarni, 2013).

Addressing this at the first meeting of the IMCI review in September 2001 attended by multisectoral institutions, namely UNICEF, WHO, PAHO (Pan America Health Organization), World Bank, bilateral institutions such as USAID and NGOs found that the importance of involving families and communities in the implementation of IMCI. Participants in this meeting realized that one of the factors that determines child mortality rates is family and community. It is therefore necessary to enhance cooperation in the implementation of IMCI with families and communities. With this cooperation, the term Community-based on Integrated Management of Childhood Illness (C-IMCI) (Kelley & Black, 2001) emerged.

One of the main focuses in implementing Community-based on Integrated Management of Childhood Illness (C-IMCI) is Family. The family is the person closest to the child and has a responsibility in providing care to his or her child. In addition, those who can receive training and education sessions of C-IMCI are from the community including members from clinics, public health promoters, Red Cross volunteers, teachers and students, religious organizations. The activities undertaken by these participants are trained to cover widespread community meetings, workshops and educational sessions, home visits, health fairs, event promotions, and mass campaigns in mass media (Harkins et al., 2008).

According to Winch et al. (2002) Community-based IMCI has three programmatic elements:
1) The first programmed element is the relationship between health facilities and the community. The first element focuses on increasing the use of official health services and services beyond the reach of society through the establishment of equal partnerships between communities and health providers. Activities in this component include the integration of remote villages with access to health facilities, collaborative oversight between health personnel and cadres, management and assistance for the severity of services by community committees, and collaboration with communities based on health information systems;

2) The second programmed element is the upgrading of care and information from community-based service providers appropriately and affordably. Service providers are members of the community and are often the first to link health facilities with sick children, promote the prevention practices of the community, and reduce harmful practices by communities;

3) The third programmed element is promotion that integrates critical nursing practice for child health and nutrition. An important aspect of the third element is to increase the use of key health in family practice, nutrition and development, combining communities and providing training to enhance and identify in taking health measures (Winch et al., 2002).

Multi sectoral platforms: optimize multi-sectoral platforms to support the sustainability of child health and nutrition

Grafik 1 : Implementation of Community and Household base IMCI (Winch et al., 2002)

3.2 Dissecusion
Implementation of Community-based on IMCI has been implemented in several countries such as in Chao, Peru and San luis, and Honduras (Harkins, 2008). In addition to those countries, C-IMCI is also implemented in Armenia. Research was conducted on Armenians who had low levels of knowledge and health. Furthermore, in the research in the community carried out the implementation of C-IMCI by step training on health and IMCI. After the training was conducted it was evaluated and obtained the result that there is significant influence from the application of C-IMCI to the knowledge and the level of public health in Armenia region. Presentation of the results obtained was an increase in exclusiveness about exclusive breastfeeding around 31.4%, increased knowledge about HIV / AIDS screening by about 30%, and use of health services for delivery of about 28.5% (Thompson & Harutyunyan, 2009).

Considering the result of C-IMCI implementation in some countries, C-IMCI's positive effect in improving public knowledge and health can decrease morbidity and mortality rate of children under 5 years old. This is because the cooperation between health workers and the community can increase public interest in health services, so it can be ensured the sustainability of health development programs (Ebuehi, 2010).

Research conducted in Flat Land regarding the cost effectiveness analysis of pneumonia disease handling at primary health in flat area. This study compared the handling of pneumonia in primary health using the IMCI approach with primary health which did not use MTBS approach in flat soil. The results showed that the handling of pneumonia disease in under-fives in primary health area using MTBS approach was more effective compared to non MTBS clinic. The effectiveness of disease handling can reduce the cost of care so as to provide cost effective in the implementation of child health. Primary health using MTBS have lower cost in terms of child care under 5 years ie Rp 11,588, - while the area that does not apply MTBS has higher cost of care which is Rp 42.629, - (Usmayarni, 2003).

Another study conducted in Manado is the relationship of application of MTBS to the incidence of diarrhea in children. This was a cross sectional study conducted on 34 children with diarrhea. The results showed that there was a relationship of MTBS implementation with diarrhea cure in children under 5 years (Mu'is et al., 2015).

Although some research results in Indonesia show positive results but the achievement of mortality rate of children under 5 years is still not evenly distributed especially in areas far from the center such as Riau, Papua and other eastern regions. The unevenness of these numbers is certainly caused by various factors. According to Basic Health Research (2007)
obstacles implementation of MTBS, among others, limited number of staff trained MTBS, trained personnel, and lack of complete facilities and supporting infrastructure.

Seeing the phenomenon in 2013 the Ministry of Health of the Republic of Indonesia issued a regulation of health minister number 70 on the implementation of Integrated Management of Community-Based Toddlers (MTBS-M). MTBS-M aims to improve access of sick toddler services at the community level in areas with difficult access to health services. The approach of health services with Integrated Management of Community-Based Sick Children is implemented on the following basic principles: 1) Establishing partnerships between first-rate health facilities and the communities they serve; 2) Increasing access to the availability of adequate health services and information at the community level and 3) Integrating the promotion of healthy behavior in the family that are essential for the survival and growth of children.

The Village Potential Data (PODES) in 2011 shows that 15% of villages in Indonesia do not have access to health personnel. Several countries with similar situations have proven that community empowerment such as cadres and shamans can be trained to recognize common alarms, essential newborn care and major causes of under-five mortality such as pneumonia, diarrhea or malaria. The training also includes the handling of other simple diseases as well as skills to refer to health workers. The training of IMCI cadres in the community is also a step that involves the community in achieving optimal health services, especially focusing on community issues. In addition, cadres as a companion of family and community to solve child health problems (Ministry of Health, 2013).

Basically, the implementation of IMCI and C-IMCI has the same goal of reducing child mortality. According to the Indonesian Demographic and Health Sources (SDKI) that the decline in child mortality under 5 years is almost half in the period between 1990 and 2007. From the evaluation of the SDKI once every four years since the implementation of IMCI data obtained child mortality under 5 years as follows: 1) In 1999 child mortality under 5 years 46/1000 live birth; 2) In 2003 child mortality under 5 years 35/1000 live birth; 3) In 2007 child mortality under 5 years 35/1000 live birth and 4) In 2012 child mortality below 5 years 32/1000.

Based on the data it appears that the implementation of IMCI is effective in reducing child mortality under 5 years but the decrease in number moves very slowly. Compared with the implementation of C-IMCI, the decrease of child mortality rate under 5 years is quite far in the last 2 years that is 27/1000 live birth (UNICEF, 2015). The achievement of child mortality under 5 years since the implementation of MTBS-M almost reached the target of
SDGs that is 25/1000 live birth. Seeing the decrease in under-five mortality rate in 2015 then it is proven that C-IMCI is effectively applied in health service.

4. CONCLUSION
The IMCI approach is well suited to developing countries in efforts to reduce mortality, morbidity and disability in infants and toddlers when done in a complete and good manner. IMCI approach is complete because it includes preventive efforts (disease prevention), nutrition improvement, promotive efforts (in the form of counseling) and curative efforts (treatment). With the existence of these components IMCI effective in overcoming and anticipate the disease that often causes death of children under 5 years in the World of pneumonia, diarrhea, and diseases that arise due to complications of childbirth. C-IMCI is a part of IMCI that aims to improve access of sick toddler services at community level in areas with difficult access to health services. Implementation of C-IMCI during the last 2 years shows the result of increased incidence of child mortality under 5 years as many as 27/1000 live birth and almost reach the target from SDGs that is about 25/1000 birth of life.

5. ACKNOWLEDGEMENT
I would like to thank ALLAH swt thanks to the mercy of her this article can be solved. besides I want to say thank you to the nursing lecturer who always guide me in working on this article

6. REFERENCES


A BIBLIOMETRIC STUDY TOWARDS THE APPLICATION OF HERBS IN AN ACADEMIC ENVIRONMENT

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ABSTRACT

The word “herbs” has been derived from the Latin words, “herba” and an old French word “herbe”. Herbs are plants are very valuable as a food, flavonoid, medical, nutrition food and perfume. In traditional folklore, especially within a Malay people, herbs are very important in treating the disease and resolve problems faced by people who are unhealthy. The application of bibliometric study applied to analyze the progress of the article based on a specific discipline, which can be the benchmark of a productivity research. This article seeks to achieve some of important objectives, namely 1) to review the concept of bibliometric towards the application of herbs contained in academic/scientific papers, 2) to examine the types of publishing scientific papers which studying about herbs, 3) to analyze the growth of the disciplines of knowledge involved in the study of herbs. This study will use quantitative methods and analysis of inductive and deductive method to measure the phase of productivity by looking at the contribution and role of the scientific papers in this field. The results of a study undertaken by the authors find that there are only a few researches undertaken related about herbs mentioned in scholarly works that have not been studied extensively by researchers.

Keywords: Bibliometric Study; Herbs; Malay Medicine; Scientific Works

1. INTRODUCTION

The production of scholarly works by academics helps society discover, use and build upon a wide range of knowledge through a powerful research and teaching platform and preserve this knowledge for future generations. In addition, the knowledge and experience documented could be a catalyst for writing activities in academic environment. The effort of the publishing and writing project will make a lifelong learning in knowledge-oriented societies can be implemented. It is also a platform for all information whether in the fields of economy, medicine, culture, health, nutrition, environment and social.

Bibliometrics is a type of research method used in library and information science that utilizes quantitative analysis and statistics to describe patterns of publication within a given field or body of literature. Bibliometrics methods of evaluation for instance can determine the influence of a publication in terms of its writer or writers and can describe the relationship between two or more writers or works. Glanzel (2003) elaborated that bibliometric analysis in fact has become a standard tool of science policy and research management in the last decades. This research will be an indicator of research productivity, research trends and emphasis given to research in various disciplines such as publication quantity, popular
subject and research quality, to evaluate a academic performance. The purpose of this study is to analyze the progress of articles according to research discipline or research field in more specific form.

2. HERBS

Herbs according to The Third Edition Of The Dictionary Board is a plants used for food, medicine, flavoring or fragrances for their savory or aromatic properties. In botanical English, the word "herb" is also used as a synonym of “herbaceous plant”. This means that it is not just a shrub plants even woody trees can also be defined as herbs if there is potential for any of these three uses. According to Herb Trade Association (1976), the term of herb is also defined as a plant, parts of plants or plant extracts which are used for medicinal purposes. The World Health Organization (WHO) estimates that up to four billion people representing 80% of the world's population depends on traditional medicine as a primary sources of healthcare which involves the use of herbs for rehabilitation, treatment and healthcare. In China, India and Africa are well-known as herbal medicine practitioners where the group is one of the largest producers and consumers of herbal treatments in the world. In Malaysia it is estimated that nearly 1230 species of which are 8% of herbaceous herbs used as herbal medicines.

History has also proven that many benefits from herbs for medical purposes. Islamic scientists and scholars also state that the purpose of using herbs not only constitutes the primary components to cure the disease but also makes the body in a healthy condition. In fact, Al-Riyasi Ibn Jarit, Egyptian ancestor and physician to Sultan Salahuddin Al Ayubi has written two books about lime and rubab and its uses. Ibn al-Baytār from Malaga wrote two books on medicinal plants in Kitāb al-Mughnī fī al-Adwiya al-Mufrada and Kitāb al-Jāmiʿ li-Mufradāt al-Adwiya wa-l-Aghdhiya (Compendium on Simple Medicaments and Foods). Another ancient record of herbs used has indicated the use of chaulmoogra oil obtained from species of Hydrocarpus gaertn for the treatment of leprosy (Le Strange, 1977). This treatment was recorded in the pharmacopoeia of the Emperor Shen Nung of Chinese between 2730 – 3000 BC.

In the Qur'an and hadith also mentioned the usefulness of plants, such as hadiths related to the use of al-Habbat al-Sawda (Black Cumin). The hadith narrated by Khalid bin Sa'd : We went out and Ghalib bin Abjar was accompanying us. He fell ill on the way and when we arrived at Medina he was still sick. Ibn Abi 'Atiq came to visit him and said to us, "Treat him with black cumin. Take five or seven seeds and crush them (mix the powder with oil) and drop the resulting mixture into both nostrils, for 'Aisha has narrated to me that she heard the Prophet (ﷺ) saying, 'This black cumin is healing for all diseases except As-Sam.' Aisha said, 'What is As-Sam?' He said, 'Death.'"

3. MALAY TRADITIONAL MEDICINE

Malaysia is a multicultural country that has rich traditional practice modalities with herbal medicines among Malay communities. It is also proven by the discovery of various materials and manuscripts related to Malay traditional medicine manuscript known as Kitab Tib. The importance of the manuscripts related Kitab Tib has been emphasized with the development of medical science and practice of traditional medicine, especially among the
Malay archipelago. There are more than 40 copies of the Kitab Tib with various titles located at the Centre of Malay Manuscript in National Library of Malaysia.

The field of medicine and healthcare is one of the newest and fastest growing disciplines. Traditional Malay medicine has an exclusive systems in terms of the concepts of disease, diagnose, treat, cure, abstinence and how to avoid the illness. Similarly, treatment methods, ingredients and manufacturing process of the medicines, the terms used and other aspects of the whole. Additionally, an interesting aspect of Malay traditional medicine is the use of herbs as a medicinal ingredient and treatment for various diseases. These ingredients include various types of herbs, medicinal plants and other living things either animate and inanimate. The best example is the name of the plant, of the type of tree, shrub, herbs and others. There is also disclosed for specific parts used, including stems, roots, tubers, content, shoots, bark, leaves, buds, or the whole tree. These plants are given a distinctive name, different from one to another and most of them can be adjusted with the term of botanical or scientific names identical in most texts in this sub-genre.

4. SCOPE AND METHODOLOGY

This study used a bibliometric method to analyze the progress of the article on herbs used in traditional Malay medicine which can be the benchmark of a productivity research. Bibliometrics is statistical analysis of written publication such as books or articles. Bibliometric analysis is not only often used in the field of library and information science but it is also used in other fields such as scientometrics to provide quantitative analysis of academic literature or for evaluating budgetary spending. Besides that, citation analysis is a commonly used bibliometric method which is based on constructing the citation graph, a network or graph representation of the citation between documents. The British Standard Institution defines bibliometrics as ‘the study of the use of documents and patterns of publication in which mathematical and statistical methods’. Thus, the purpose of bibliometric analysis is to quantify, compare and communicate the importance of your scientific work. Moreover, bibliometrics data will increase the visibility and impact of research, identifying the most suitable journals for publication, identifying potential collaborators and areas for research and others.

Therefore, the main objective of the bibliometric study is the academic and research works that have been published in scientific journals. The development publication also helps in obtaining data and information in bibliometric analysis. While Pitchard who introduced the terms of bibliometrics in 1969 explained bibliometrics as “the application of mathematical and statistical methods to books and other media of communication”. This definition expands the scope of bibliometric to various media not only to books and scientific journal only.

In applying this bibliometric method, search methods are important to ensure that any data on the research can be found effectively. From a search keywords, the authors found research and scientific works on herbs and traditional Malay medicine through articles, books, magazines, thesis, dissertation, journal and others. Search keywords are as follows:
Table 1: The technique to obtain data

<table>
<thead>
<tr>
<th>Keyword Search</th>
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<tbody>
<tr>
<td>1. Herbs</td>
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<tr>
<td>2. Herbs and Plant</td>
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<tr>
<td>3. Herbal Treatment</td>
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<td>4. Traditional Medicine</td>
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<td>5. Medicinal Plant</td>
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</table>

After all the data is collected, it will be scanned manually and classified using Microsoft Office Excel.

5. FINDINGS

In this bibliometric study, the author have been focusing on herbs in which this production data will be the main reference data for academic or herbalist regarding the study of herbs that have been studied. This study will focus on two items to be analyzed:

1. The types of publishing scientific papers which studying about herbs
2. The disciplines of knowledge involved in the study of herbs

5.1 Literature Review About Herbs In Scientific Papers

![Figure 1: Frequency Herbs In Scientific Papers](image)
Referring to the clustered column above, the results of previous research on herbs found that majority of study are dominated by prosiding by 74%. Articles were in the second highest percentage of 9.7%. This was followed by a journal with the percentage of 7.5% and book by 3.7%. The lowest percentage recorded PhD thesis with the percentage 2.2%, master dissertation by 1.5% and micrographs by 0.75%. List of materials related publications herbs can be examined through the following table:

5.2 The List Of Publishing Scientific Papers And Disciplines Of Knowledge About Herbs.

<table>
<thead>
<tr>
<th>Book</th>
<th>Disciplines Of Knowledge</th>
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<tbody>
<tr>
<td>4. Prophetic Medicine and Herbalism (2014)</td>
<td>Islamic Studies</td>
</tr>
<tr>
<td>5. Warisan Perubatan Melayu</td>
<td>Herbal and Traditional Medicine</td>
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<tr>
<th>Journal</th>
<th>Disciplines Of Knowledge</th>
</tr>
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<tr>
<td>2. Antioxidant And Antibacterial Activities Of Flavonoids And Curcuminoids From Zingiber Spectabile Griff. (2012)</td>
<td>Food Science Technology</td>
</tr>
<tr>
<td>4. Antioxidant Activities And Cytotoxicity Of Zingiber Zerumbet (L.) Smith Rhizome (2013)</td>
<td>Botanical</td>
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<td>5. Antioxidant Properties Of Selected Etlingera And Zingiber Species (Zingiberacea From Borneo Island. (2012)</td>
<td>Biological Science</td>
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<td>Article</td>
<td>Disciplines Of Knowledge</td>
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<td>Agriculture</td>
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<td>Food Science</td>
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<td>Technology</td>
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<tr>
<td>5. Thai Zingiberaceae : Species Diversity And Their Uses. (1999)</td>
<td>Biological Science</td>
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<td></td>
<td>Islamic Studies</td>
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<td>No.</td>
<td>Title</td>
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<tr>
<th>Prosiding</th>
<th>Disciplines Of Knowledge</th>
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<tr>
<td>1. Tongkat Ali : From Lab To Market.</td>
<td>Herbal and Traditional Medicine</td>
</tr>
<tr>
<td>2. Analyzing Malay Medical Manuscript Mss 2999 The Findings And The Hope For The Future.</td>
<td>Medicine Islamic Studies</td>
</tr>
<tr>
<td>3. Commercialized Innovative Herbal Products From Upm</td>
<td>Herbal and Traditional Medicine</td>
</tr>
<tr>
<td>4. Development Of Herbal Product For Cancer Theraphy</td>
<td>Herbal and Traditional Medicine</td>
</tr>
<tr>
<td>7. Anti-Proliferative Effect Of Clinacanthus Nutans On Ovarian, Breast And Colorectal Cancer Call Lines.</td>
<td>Medicine Biological Science Agriculture</td>
</tr>
<tr>
<td>8. Detection Of Irradiated Herbs Using Photo-Stimulated Luminescence Technique.</td>
<td>Biological Science Agriculture</td>
</tr>
<tr>
<td>9. Optimization Of Antioxidant Activity In Clinacanthus Nutans</td>
<td>Food Science Technology</td>
</tr>
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<td>10. Effects Of Equal Doses Of Sulforaphane, Curcumin And Quercetin On Heme Oxygenase 1 Gene Expression In Mice Liver</td>
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<td>Asam Gelugur Powder Rich In HCA (Hydroxycitric Acid : A Potential Crop For Weight Management)</td>
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<td>Toxicology Study Of Hibiscus Sabdariffa L.Leaves Extract On Normal Sprague-Dawley Rats</td>
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<td>Clinacanthus Nutans L : Safety And Toxicity Study</td>
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<td>In Vito Toxicological Evaluation Of 5O Methanol Extracts From Traditional Medicinal Plants Used By The Orang Asli</td>
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<td>In Silico Prediction Of Drug Likeness And Admet Properties Of Some Centella Compounds</td>
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<td>Nutrigenomics Effects Of Curculigo Latifolia On Type 2 Diabetic Model</td>
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<td>Protein Expression Pattern In Swietenia Macrophylla Seed</td>
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<td>The Effect Of Packaging Technique On Quality Of Dried Mas Cotek (Ficus Deltoidea)</td>
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<td>Potential Of Medicinal Plants Used By The Jakun People As Antituberculosis Agnets</td>
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<td>Kaempferia L: Herbs And Ornamental Potential Of Zingiberacea Species</td>
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<td>Distribution Of Herbs Cultivation In Peninsular Malaysia</td>
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<td>Salvia Miltiorrhiza (2004)</td>
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<td>Schsandrin B And Other Dibenzocyclooctadiene Lignans (2004)</td>
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<td>Echinacea And Immunostimulation (2004)</td>
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<td>Us Of Silicon-Based Oligonucleotide Chip In Authentication Of Toxic Chinese Medicine (2004)</td>
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<td>Penyelidikan Dan Pembangunan Serta Pengkomersialan Produk Berasaskan Tanaman Ubatan</td>
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**PhD Thesis**

<table>
<thead>
<tr>
<th>No.</th>
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<td>1.</td>
<td>Phytochemistry And Pharmacology Of Plants From The Ginger Family, Zingiberaceae.</td>
<td>Chemistry Pharmacology</td>
</tr>
<tr>
<td>2.</td>
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<td>Herbal and Traditional Medicine</td>
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**Master Dissertation**

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</table>

**Micrographs**

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Disciplines Of Knowledge</th>
</tr>
</thead>
</table>
5.3 The Disciplines Of Knowledge Involved In The Study Of Herbs

Based on the study of the herbs classification, analysis of the results are as follows:

Table 2 Classification of research on herbs

<table>
<thead>
<tr>
<th>No.</th>
<th>Disciplines of Knowledge</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Agriculture</td>
<td>8</td>
<td>5.3</td>
</tr>
<tr>
<td>2.</td>
<td>Herbal and Traditional Medicine</td>
<td>82</td>
<td>54</td>
</tr>
<tr>
<td>3.</td>
<td>Chemistry</td>
<td>7</td>
<td>4.6</td>
</tr>
<tr>
<td>4.</td>
<td>Food Science Technology</td>
<td>9</td>
<td>5.9</td>
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<tr>
<td>5.</td>
<td>Botanical</td>
<td>9</td>
<td>5.9</td>
</tr>
<tr>
<td>6.</td>
<td>Biology Science</td>
<td>10</td>
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<tr>
<td>7.</td>
<td>Medicine</td>
<td>8</td>
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</tr>
<tr>
<td>8.</td>
<td>Pharmacology</td>
<td>4</td>
<td>2.6</td>
</tr>
<tr>
<td>9.</td>
<td>Forest Research</td>
<td>8</td>
<td>5.2</td>
</tr>
<tr>
<td>10.</td>
<td>Islamic Studies</td>
<td>6</td>
<td>3.9</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>151</td>
<td>100</td>
</tr>
</tbody>
</table>

Figure 2 Disciplines of Knowledge on Herbs

*Frequency Disciplines of Knowledge on Herbs*
Research on the method of analysis conducted in the previous studies found that most studies on herbs done on a scientific analysis (laboratory studies). Studies on aspects of science has been divided into eight areas that is agriculture, herbal and traditional medicine, chemistry, food science technology, botanical, biological science, medicine and pharmacology which focus on scientific discussion. While, for forest research more on new research and survey data on herbs and only one field that focuses on the analysis of herbal-based Islamic studies and manuscripts.

Through comparative evaluation of research found that a total of 137 kinds of studies involves the study of the scientific aspects compared to only 8 studies based on forest research and 6 studies based on Islamic studies. Therefore, it proves that scientific research on herbs is well known and needed by researcher and not just theoretical knowledge solely.

6. ASPECT OF STUDY AND ADVANCED RESEARCH ON HERBS

Many studies have been presented on the use of herbs to treat diseases and one of them is the medical Malay manuscript that is the Kitab Tib. Basically in Kitab Tib contains the way to know the disease, general tips for health, chronic diseases such as typhoid and cancer, a common illnesses such as fever, medication and methods of treatment and cure of disease. Most of this knowledge is obtained when parts of plants such as leaves, roots, stems, flowers are used as food and medicines and animal behavior are observed to determine whether certain plants are poisonous or not. From the experience, humans use a variety of nourishment from nature. For instance, ginger in treating fever, onions treat leprosy, lime to cleanse the scalp and eliminate unpleasant smells on the body as well as others.

Therefore, it has become essential and important to organize and orderly collection of information regarding herbs. Through the organize information, it may raise awareness among the community about the potential of herbs due to the lack of detailed information related to it, as practiced by the Chinese and Indian communities.

Scientific research have shown that some species of herbaceous plants already containing organic compound and have become an alternative medicine. Among researchers from Universiti Putra Malaysia has found a new technology to prevent early cervical cancer by using zingiber zerumbet smith or known as ‘lempoyang’ wild ginger. The studies that have undergone clinical trials can provide a therapeutics to kill cancer cells without damaging normal tissues. It has been shown to have anti-cancer and opoptosis-inducing properties against various human tumour cells. The rhizomes of the plants are employed as a traditional medicine for some ailments and as condiments. Through this discovery, it benefits for the cervical cancer patient which it can reduces the cost of treatment compared use the imported medicines and is ideally using with the chemotherapy treatment.

Research and documentation of knowledge about herbs is very important in terms of the development of modern products. With comprehensive data analysis, further investigations of herbs as potential medicines, therapeutics and cosmetics can be achieved. For example, the discovery of anticancer compounds from several species of tropical forest plants by Dr Azimahtol Hawariyah Lope Pihie of the Department of Biochemistry of the National University of Malaysia, has proven that the plant also has high efficacy and high
medical value including as an anticancer agent. Based on these reasons, the effort to produce scientific data is something that needs to be emphasized in highlighting herbs as an alternative treatment and creating public awareness of the potential of this plant.

In addition, research on herbal plants should also be expanded to create a collaborative network and raising awareness about the potential of this field for creating sustainable economic growth. Most studies only cover a specific field whereas if the cooperation is carried out it can be beneficial to many parties. Among the organizations conducting research while preserving herbs are Malaysian Research and Agriculture Institutions (MARDI), Forestry Institutions Malaysia (FRIM) and Universiti Putra Malaysia. In addition, the knowledge of this herb can also be inherited to future generations so that we do not lose the knowledge that brings great potential for us.

The combination of research on herbs from the aspects of science and religion should be intensified which would prove the truth of the Islamic teachings with the analysis of scientific evidence. In the Holy Quran and hadith mentioned many herbs and treatment systems that can cure diseases. Through the scientific methods, it can be benefit to identify herbs that can be used as medicine and have a safe use of pharmaceuticals. Additionally, it can prevent incidents of poisonous and toxicity and ensure the quality of traditional medicines.

7. CONCLUSION

Herbs are natural commodities that have not yet been investigated. The benefit to mankind, it is undeniable. Several proposals for new research on herbal are expected to inspire in producing something useful. If no effort is taken to maintain herbaceous plants, we will lose a very valuable knowledge civilization. So research on herbs by commercially needs to be done and the pharmaceutical results has to be pattern.

8. ACKNOWLEDGEMENT

Hence, the efforts of researchers from Islamic Science University of Malaysia through grants USIM-C PPP/UCG-0116/FPQS/30/14316 entitled “In-Depth Analysis Studies Of Zingiber Zerumbet According To Al-Quran, Ahadith And Old Malay Manuscript Into Scientific Research Towards Dengue Protease” very significant in the development of knowledge. Further research on herbs is expected to produce something for the benefit of researchers in the Asian region.

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SMOKING PREVALENCE AND STOP SMOKING AWARENESS AMONG MALAYSIAN UNIVERSITY STUDENTS

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²University of Malaya Centre for Addiction Sciences, University of Malaya, 50603 Kuala Lumpur, Malaysia
³Faculty of Dentistry, Lincoln University College, 47301 Petaling Jaya, Malaysia

ABSTRACT

The prevalence of cigarette smoking in Malaysia is still one of the highest in South East Asia. Malaysia aspires to be a smoke-free nation by 2045. This study investigates the extent of smoking and stops smoking awareness among University (a Smoke-free campus) students. A survey that covers the initiation, habit patterns, and awareness on quit smoking was conducted among currently-enrolled University Malaya students. A total of 843 students responded to the survey. The mean age of students was 22.3(±3.8) years with two-thirds being female (64.5%) respondents. Overall, the prevalence of ever and current smokers were 22.4% and 12.3% respectively. The prevalence of ever and current smokers for males were 52.2% and 32.8%, respectively. Meanwhile, the prevalence of ever and current smoker for females were 6.1% and 1.1% respectively. The prevalence of smoking reported significantly higher among male compared to female students (p<0.001). Mean age of smoking initiation was 14.8(±3.6) years old. Respondents started smoking as early as 4 and as late as 27 years old. Of those who smoked, 10.1% have quit smoking while 12.3% are still smoking. Majority that succeeded in quitting took 1–5 attempts (50.0%), 6 – 10 (22.1%), 16 – 20 (15.3%), 21 and more (8.1%), and 11 – 15 (3.5%). The prevalence of smoking among youth in university remained high. Continuous intervention and more comprehensive anti-smoking policy are warranted to prevent increasing prevalence of smoking along with enhancing awareness towards consequences of smoking.

Keywords: Smoking prevalence; advocacy; quit smoking; awareness; Malaysian youth

1. INTRODUCTION

Smoking is a major public health concern in Malaysia. The prevalence of cigarette smoking in Malaysia is still one of the highest in South East Asia despite the on-going public health campaigns to encourage smoking cessation (Morrow & Barraclough, 2003; Noor Zurani, Hussain, Rusdi, & Muhammad Muhsin, 2008). It is the only legal consumer item that is highly addictive and kills half of its regular users. It is also linked to various health problems such as respiratory, cancer and heart diseases. In Malaysia, lung cancer cases for example have been observed to have increased with a rate of 17% per year. Smoking habits have been identified as the cause of at least half a million cases of coronary heart disease.

2. METHODS

2.1. Research Design and Participant

A cross-sectional study was carried out among students (undergraduates and postgraduates) studying in University of Malaya. An online survey was conducted in the campus by linking to the student email group. Data is collected between April and June 2016. The survey was fully approved by the University of Malaya’s medical ethics committee. Informed consent was obtained from all the participants.
2.2. Instruments
A self-administered validated and pretested structured questionnaire was used to collect the data. The questionnaire was developed by incorporating questions based on previous research (Global Youth Tobacco Survey, 2012; Ministry of Health, 2012). The included questions were on demographic characteristics, smoking status, age first started smoking, and attempts took to quit smoking. The indicator for ever smoker was defined as the act of smoking before in their entire life. Meanwhile, a current smoker is defined as the act of smoking daily and has smoked within the last 30 days.

2.3. Statistical Analysis
In all 843 students responded. Data was analysed using the Statistical Package for the Social Sciences (SPSS), version 22. The response for smoking status was analysed with categorical variable (Yes and No answer). Descriptive analysis (frequency and cross-tabulation) was used to analyse the characteristic and the result is presented in percentage. The chi-square analysis was used to test the association between smoking status and socio-demographics. The findings with $p$-value < 0.05 are considered as statistically significant.

3. RESULTS AND DISCUSSION

3.1 Respondent Characteristics
Table 1 shows the characteristics of the respondents. In all 843 students responded to the online survey. There were almost two times females than males, with majority being among 18-23 years-old (84.6%) non-science (67.7%) students. To the section on smoking, almost a quarter admitted they had tried smoking before (22.4%), but only 12% are current smokers. Eighty-five students indicated they had attempted to quit with majority (50%) attempting between one to 5 times (Table 1).

Table 1 Characteristics of respondents (n = 843)

<table>
<thead>
<tr>
<th>Socio-demographic</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
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</tr>
<tr>
<td>Male</td>
<td>299</td>
<td>35.5</td>
</tr>
<tr>
<td>Female</td>
<td>544</td>
<td>64.5</td>
</tr>
<tr>
<td><strong>Age Groups</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 - 20</td>
<td>134</td>
<td>15.9</td>
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<tr>
<td>21 - 23</td>
<td>579</td>
<td>68.7</td>
</tr>
<tr>
<td>24 - 26</td>
<td>73</td>
<td>8.7</td>
</tr>
<tr>
<td>27 ≥</td>
<td>57</td>
<td>6.8</td>
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<td><strong>Level of Study</strong></td>
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<tr>
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<td><strong>Area of Study</strong></td>
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<tr>
<td>Science</td>
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<tr>
<td>Non-Science</td>
<td>571</td>
<td>67.7</td>
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<tr>
<td><strong>Ever Smoker</strong></td>
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<td></td>
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<tr>
<td>Yes</td>
<td>189</td>
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<tr>
<td>No</td>
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<td>77.6</td>
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<tr>
<td><strong>Current Smoker</strong></td>
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<td></td>
</tr>
<tr>
<td>Yes</td>
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<td>12.3</td>
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<tr>
<td>No</td>
<td>85</td>
<td>10.1</td>
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<tr>
<td>Never smoking</td>
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<td>77.6</td>
</tr>
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Age Groups Started Smoking (n = 189)

<table>
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<th>Age Groups</th>
<th>Started Smoking (%)</th>
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<td>4 – 9</td>
<td>15</td>
</tr>
<tr>
<td>10 – 19</td>
<td>159</td>
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<tr>
<td>20 and above</td>
<td>15</td>
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</tbody>
</table>

Attempts Took to Quit Smoking (n = 85)

<table>
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<th>Attempts Took to Quit Smoking</th>
<th>Quit (%)</th>
</tr>
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<tr>
<td>1 – 5</td>
<td>43</td>
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<tr>
<td>6 – 10</td>
<td>19</td>
</tr>
<tr>
<td>11 – 15</td>
<td>3</td>
</tr>
<tr>
<td>16 – 20</td>
<td>13</td>
</tr>
<tr>
<td>21 and above</td>
<td>7</td>
</tr>
</tbody>
</table>

3.2. Prevalence of Ever and Current Smoker by Socio-Demographic

It is encouraging to observe a general decreasing pattern between those who ever smoke and current smokers across all socio-demographic variables. Perhaps the findings are indicative of some success of the efforts and policies made by the government (Table 2). Unfortunately, the decrease among non-science current smokers appeared to be also. Both differences observed between ever and current smokers among gender (p=0000) and, area of study (p=0005) are statistically significant (Table 3).

Table 2 Prevalence of ever and current smoker by gender, age group, level of study, and area of study

<table>
<thead>
<tr>
<th>Socio-demographic</th>
<th>Ever Smoker (%)</th>
<th>Current Smoker (%)</th>
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</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
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<tr>
<td>Male</td>
<td>52.2</td>
<td>32.8</td>
</tr>
<tr>
<td>Female</td>
<td>6.1</td>
<td>1.1</td>
</tr>
<tr>
<td>Age Groups</td>
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<tr>
<td>18 - 20</td>
<td>17.2</td>
<td>9.7</td>
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<tr>
<td>21 - 23</td>
<td>22.3</td>
<td>13.0</td>
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<td>24 - 26</td>
<td>27.4</td>
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<td>12.5</td>
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<td>10.8</td>
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<td>16.5</td>
<td>7.7</td>
</tr>
<tr>
<td>Non-Science</td>
<td>25.2</td>
<td>14.5</td>
</tr>
</tbody>
</table>

3.3 Association of Ever and Current Smoker by Socio-Demographic

Table 3 Association of ever and current smoker by gender, age group, level of study, and area of study

<table>
<thead>
<tr>
<th>Socio-demographic</th>
<th>Ever Smoker</th>
<th>Current Smoker</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\chi^2$</td>
<td>p-value</td>
</tr>
<tr>
<td>Gender</td>
<td>235.834</td>
<td>0.000</td>
</tr>
<tr>
<td>Age Groups</td>
<td>4.971</td>
<td>0.174</td>
</tr>
<tr>
<td>Level of Study</td>
<td>0.321</td>
<td>0.571</td>
</tr>
<tr>
<td>Area of Study</td>
<td>7.971</td>
<td>0.005</td>
</tr>
</tbody>
</table>
4. **CONCLUSION**

University Malaya is a comprehensive university with a large student population. It is encouraging to note the small proportion of current students are not avid smokers. It can be concluded that the efforts made by all parties within and outside the university campus are effective. However, more needs to be done especially continuous improvement via other modes of awareness program.

5. **ACKNOWLEDGEMENT**

This research is supported financially by University of Malaya through the University Malaya Research Grant (UMRG) with grant number GC004D-15HTM.

6. **REFERENCES**


Socio-economic Status of Tuberculosis Patients and the Role of Risk Factors in the Vicious-Circle of TB in Pakistan

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ABSTRACT

Background: Although the socio-economic status of tuberculosis (TB) patients has been studied worldwide, limited studies are available in Pakistan. To the best of our knowledge, no study has ever been conducted in this area, i.e. on linking risk factors with the TB-history of patients’ families. Therefore, this study aims to assess the important risk factors in TB prevalence, and to explore how it relates to the vicious-circle of TB.

Methods: A multistage sampling was adopted to select the study area and the patients. A total of 269 patients were interviewed through an interviewer-administered questionnaire. A chi-square test and T-test were used to find the differences among patient groups. A probit model was used to determine the association between risk factors and the vicious-circle of TB.

Results: Patients were mostly young, in their productive years; 23.42% were teenagers, while 32.71% were in ages ranging from 21-30 years. Most of the patients were illiterate or had primary education only. Patients were of low economic status, as 74.7% were living in Kacha houses, and 54.65% made less than 250 USD per month in household income. Insufficient income and food, large household size, and few rooms with no ventilation were common risk factors among the patients. Results of the probit model show that significant risk factors associated with TB history in patients were age (β=-0.041, p=0.004), education (β=-0.055, p=0.032), structure of house (β=1.045, p=0.002), household size (β=0.098, p=0.005), rooms in home (β=-0.198, p=0.028), room ventilation (β=-0.663, p=0.006), monthly income (β=-0.003, p=0.014), income sufficiency (β=-0.604, p=0.015), food sufficiency (β=-0.0675, p=0.010), smoking (β=1.003, p=0.012), diabetes (β=0.826, p=0.007) and heart disease (β=0.967, p=0.006).

Conclusion: The current TB control program needs to formulate strategies to target specific risk factors and poverty reduction simultaneously. Proper health education and awareness are needed for both patients and the general public, particularly for the lower socio-economic classes who are in the grip of the vicious-circle of TB.

Keywords: Pakistan; risk factors; Socio-economic status; tuberculosis

1. INTRODUCTION

Tuberculosis is one of the major public health problems in Pakistan, and accounts for 61% of the tuberculosis burden in the Eastern Mediterranean Region. Pakistan was ranked as having the 5th
highest tuberculosis burden in the world (Ali et al., 2015). Pakistan is also listed among the group of six countries that accounts for 60% of new cases worldwide, along with India, Indonesia, China, Nigeria, and South Africa (World Health Organization, 2016). In addition, there is the worrying situation in Pakistan where TB is now affecting people in their most productive age (15-64) (Shafqaat and Jamil, 2012). In Pakistan, the DOTS program was adopted as the National Strategy in 2000. Later, as a part of primary health care, it was expanded to all public health facilities. The program was successful in achieving 70% case detection and 85% positive treatment outcome of the global target set by STOP TB Partnership (Vermund et al., 2009). Pakistan’s Ministry of health declared TB a national public health emergency in 2001 under the “Islamabad Declaration “(Metzger et al., 2010)”. The National Tuberculosis Control Program officially achieved a tuberculosis case detection rate of 64% in 2011, primarily due to the expansion of DOTS (Fatima et al., 2014). This cure rate increased from 64% in 2003 to 74% in 2009. Countrywide implementation of DOTS has been strengthened, supporting a network of 11,445 diagnostic centres and more than 5,000 treatment centres in 134 districts of Pakistan. Despite many achievements under the DOTS program, the bulk of patients are still not picked by community health providers, nor are they properly observed (Iram et al., 2011). Thus, TB is still a huge burden among the chronic diseases prevailing in Pakistan.

In spite of rapid expansion and consolidation of TB care, there are still many constraints for effective TB Control. The disease is known to be directly linked to socioeconomic status, for example, poverty and low income. In addition, 75% of patients are in the productive age group. Other demographic variables have a significant role in TB prevalence, such as age (Fløe et al., 2015; Moosazadeh and Amiresmaili, 2015), gender (Ali et al., 2013; Fløe et al., 2015; Malik and Syed, 2012; Moosazadeh and Amiresmaili, 2015), education (Fløe et al., 2015; Malik and Syed, 2012), rural-urban residential (Malik and Syed, 2012; Moosazadeh and Amiresmaili, 2015), household size (Malik and Syed, 2012), toilet facilities (Malik and Syed, 2012), drinking water (Malik and Syed, 2012), type of house (Malik and Syed, 2012), distance from health facility (Malik and Syed, 2012). A significant number of TB patients fall among populations with high levels of chronic poverty and malnutrition (Dubos and Dubos, 1987). Due to a scarcity of money/income, people suffer from additional stress that weakens their immune system, subsequently increasing the TB incidence rate (Miandad et al., 2015). As a result, TB is more prevalent among the disadvantaged and marginalized people. Moreover, it is also reported that TB is more prevalent among landless people, living below poverty line and living in Kacha houses (Muniyandi et al., 2007).

An extensive literature review revealed the importance of socio-economic consequences, risk factors; environmental factors and demographic characteristics of TB patients in different countries. Few studies have focused on the socio-economic status of TB patients in Pakistan, and the factors contributing to the high prevalence of TB. Therefore, this study has to evaluate the socio-economic status of TB patients and to determine how these socio-economic risk factors influence the vicious-circle of tuberculosis.

2. METHODS

2.1 Study Area and Participants

Khyber Pakhtunkhwa province was purposively selected from the four provinces of Pakistan due to the highest prevalence of TB (DHIS, 2014). In spite of the Directly Observed Treatment short course (DOTS) program in the province, approximately 58,449 new cases of
TB were recorded in 2014 (DHIS, 2014). District Mardan was purposively selected as the study area, as it is the 2\textsuperscript{nd} largest city in the province (Government of Pakistan, 1998). Its population is about 1.5 million, of which 0.75 million are male and 0.7 million female (Pakistan Bureau of Statistics, 1998). A total of 5,624 TB patients were registered at 11 TB centres and private clinics in the district (Distric TB Office, 2016). Total 1019 patients had pulmonary TB. The pulmonary TB patient lists were extracted from 1019 patients. A single population proportion formula, as suggested by Naing et al. (2006). By the proportional allocation method, the total samples collected were 269, of which 130 were male and 139 female patients.

2.2 Statistical Tools

A chi-square test and T-test were used to find the differences between patient groups. The dependent variable was dichotomous; 0= no TB family history, and 1= TB history. As the dependent variable was a binary variable, therefore, probit estimation is known to be more sophisticated model (Asteriou and Stephen, 2007).

3. RESULTS

3.1 Socio-economic Status of patients

Of 269 adult respondents, 51.67% were female and the rest were male patients. These patients were mostly young and in their productive years, e.g. 23.42% were teenagers and 32.71% were in ages ranging from 21-30 years. This was an alarming situation in the study area, in that these patients were young and in productive age groups. Likewise, 60.2% were married. These patients were also illiterate or had only primary level education, as shown in Table 1. These patients were found to be from very low-income classes, shown by the structure of their houses; 74.7% lived in Kacha houses, and 54.65% made <250 USD per month in household income. Similarly, 34.20% and 28.63% were wage labourers, and in agriculture as their main source of family income respectively.

Of total patients, 54.65% were from households of 5-10 members, 79.18% were living in less than 2 rooms, and 42.38% reported that these rooms were ventilated properly, as shown in Table 1. In addition, most of the patients (70.26%) lived in rural areas. This implies that household members shared these unventilated rooms, which is indicative of a high risk for TB exposure. When patients were asked about income and food sufficiency, less than half (43.50%, 43.87% respectively) expressed that they were sufficient. Even fewer respondents (11.52%) claimed that they were smokers or had any smoking history. Disease history is an important risk factor for TB. Of the total patients, 20.82% were diabetic, 12.64% had heart problems, whereas only 16 patients had hepatitis.

Table 1. Socio-economic status of TB patients

<table>
<thead>
<tr>
<th>Socio-Economic Characteristics</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age Group</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-20</td>
<td>63</td>
<td>23.42</td>
</tr>
<tr>
<td>21-30</td>
<td>88</td>
<td>32.71</td>
</tr>
<tr>
<td>31-40</td>
<td>54</td>
<td>20.1</td>
</tr>
<tr>
<td>41-50</td>
<td>45</td>
<td>16.72</td>
</tr>
<tr>
<td>51-60</td>
<td>19</td>
<td>7.06</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>139</td>
<td>51.67</td>
</tr>
<tr>
<td><strong>Socio-Economic Characteristics</strong></td>
<td><strong>Frequency</strong></td>
<td><strong>Percentage</strong></td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>--------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Male</td>
<td>130</td>
<td>48.33</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
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<tr>
<td>Unmarried</td>
<td>91</td>
<td>33.8</td>
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<tr>
<td>Married</td>
<td>162</td>
<td>60.2</td>
</tr>
<tr>
<td>Widowed</td>
<td>16</td>
<td>6.00</td>
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<td><strong>Education</strong></td>
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<tr>
<td>Illiterate</td>
<td>146</td>
<td>54.27</td>
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<tr>
<td>Primary</td>
<td>9</td>
<td>3.34</td>
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<tr>
<td>Middle</td>
<td>49</td>
<td>18.22</td>
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<tr>
<td>Matric</td>
<td>27</td>
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<tr>
<td>Higher secondary</td>
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<tr>
<td>Bachelor</td>
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<td>7.44</td>
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<tr>
<td>Master</td>
<td>9</td>
<td>3.35</td>
</tr>
<tr>
<td><strong>Structure</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pacca House</td>
<td>68</td>
<td>25.28</td>
</tr>
<tr>
<td>Kacha House</td>
<td>201</td>
<td>74.72</td>
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<tr>
<td><strong>Household Size</strong></td>
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<td></td>
</tr>
<tr>
<td>1-5</td>
<td>73</td>
<td>27.14</td>
</tr>
<tr>
<td>5-10</td>
<td>147</td>
<td>54.65</td>
</tr>
<tr>
<td>10-15</td>
<td>32</td>
<td>11.90</td>
</tr>
<tr>
<td>&gt;15</td>
<td>17</td>
<td>6.31</td>
</tr>
<tr>
<td><strong>Rooms</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤2</td>
<td>213</td>
<td>79.18</td>
</tr>
<tr>
<td>3-4</td>
<td>25</td>
<td>9.29</td>
</tr>
<tr>
<td>&gt;4</td>
<td>31</td>
<td>11.53</td>
</tr>
<tr>
<td><strong>Ventilation</strong></td>
<td>114</td>
<td>42.38</td>
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<tr>
<td><strong>Monthly Income</strong></td>
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<td></td>
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<td>&lt;250</td>
<td>147</td>
<td>54.65</td>
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<tr>
<td>250-500</td>
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<td>30.86</td>
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<tr>
<td>500-750</td>
<td>23</td>
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<tr>
<td>&gt;750</td>
<td>16</td>
<td>5.94</td>
</tr>
<tr>
<td><strong>Income</strong></td>
<td>117</td>
<td>43.50</td>
</tr>
<tr>
<td><strong>Food</strong></td>
<td>118</td>
<td>43.87</td>
</tr>
<tr>
<td><strong>Smoking</strong></td>
<td>31</td>
<td>11.52</td>
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<tr>
<td><strong>Location</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
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<td>Rural</td>
<td>189</td>
<td>70.26</td>
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<tr>
<td><strong>Employment</strong></td>
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<td></td>
</tr>
<tr>
<td>Agriculture</td>
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<td>28.63</td>
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<tr>
<td>Trader</td>
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<td>15.24</td>
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<tr>
<td>Labour</td>
<td>92</td>
<td>34.20</td>
</tr>
<tr>
<td>Servant</td>
<td>33</td>
<td>12.27</td>
</tr>
<tr>
<td>Others</td>
<td>26</td>
<td>9.66</td>
</tr>
<tr>
<td><strong>Disease</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diabetes</td>
<td>56</td>
<td>20.82</td>
</tr>
<tr>
<td>Heart disease</td>
<td>34</td>
<td>12.64</td>
</tr>
</tbody>
</table>
Socio-Economic Characteristics | Frequency | Percentage
--- | --- | ---
Hepatitis | 16 | 5.95

3.2 Results of Regression Model

Results of the probit model are shown in Table 2. The model was estimated using STATA-13. Results show that the model was a good fit with an $\chi^2$-p-value=0.000 and Pseudo $R^2$=0.532. Of sixteen independent variables in the model, twelve were significant at 1% or 5% significance level, while the rest were insignificant.

Patient age was significant (p-value=0.004) and had a negative co-efficient. This implies that most of the young patients had TB history in their families. Education also had a negative co-efficient (-0.055) and was significant at a 5% level of confidence. This means that educated patients from literate families are less likely to have TB history. Structure of house that show patients’ standard of living was positively associated with TB family history at p-value=0.002. This means that people living in Kacha houses are more likely to have TB in their families. Similarly, household size had a positive co-efficient (0.098) and was significant at p-value 0.002. Results indicate that the larger the household, the larger the probability that a patient will have contact with healthy family members. Number of rooms in a house is a very important risk factor for TB, and it was found to be negatively (-0.198) associated with TB family history. Results show that when the number of rooms increases, patients having contact with other household members will decrease. Likewise, room ventilation had a negative co-efficient (-0.663) and was significant at p-value=0.006. Monthly household income and sufficiency were negatively associated with TB family history, and both were significant at a 5% level of significance. Food sufficiency also had a negative co-efficient (-0.675) and was significant at p-value=0.010. Unlike food sufficiency, smoking had a positive co-efficient (1.003) and was significant at a 5% level of significance. The presence of other diseases is an important risk factor for TB prevalence. For example, results for diabetes and heart disease show a positive association with TB history and were significant at a 1% level.

Table 2. Results of the Probit Model

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficients</th>
<th>Standard Error</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1 Age</td>
<td>-0.041</td>
<td>0.015</td>
<td>0.004**</td>
</tr>
<tr>
<td>X2 Sex</td>
<td>0.056</td>
<td>0.330</td>
<td>0.860</td>
</tr>
<tr>
<td>X3 MS</td>
<td>0.310</td>
<td>0.271</td>
<td>0.252</td>
</tr>
<tr>
<td>X4 Education</td>
<td>-0.055</td>
<td>0.025</td>
<td>0.032*</td>
</tr>
<tr>
<td>X5 Structure of House</td>
<td>1.045</td>
<td>0.331</td>
<td>0.002**</td>
</tr>
<tr>
<td>X6 Household Size</td>
<td>0.098</td>
<td>0.035</td>
<td>0.005**</td>
</tr>
<tr>
<td>X7 Rooms in Home</td>
<td>-0.198</td>
<td>0.090</td>
<td>0.028*</td>
</tr>
<tr>
<td>X8 Room Ventilation</td>
<td>-0.663</td>
<td>0.243</td>
<td>0.006**</td>
</tr>
<tr>
<td>X9 Monthly Income</td>
<td>-0.003</td>
<td>0.001</td>
<td>0.014*</td>
</tr>
<tr>
<td>X10 Income Sufficiency</td>
<td>-0.604</td>
<td>0.247</td>
<td>0.015*</td>
</tr>
<tr>
<td>Variables</td>
<td>Coefficients</td>
<td>Standard Error</td>
<td>Significance</td>
</tr>
<tr>
<td>-------------------</td>
<td>--------------</td>
<td>----------------</td>
<td>-------------</td>
</tr>
<tr>
<td>X11</td>
<td>-0.675</td>
<td>0.261</td>
<td>0.010**</td>
</tr>
<tr>
<td>X12</td>
<td>1.003</td>
<td>0.399</td>
<td>0.012*</td>
</tr>
<tr>
<td>X13</td>
<td>0.011</td>
<td>0.254</td>
<td>0.687</td>
</tr>
<tr>
<td>X14</td>
<td>0.101</td>
<td>0.249</td>
<td>0.965</td>
</tr>
<tr>
<td>X15</td>
<td>0.826</td>
<td>0.306</td>
<td>0.007**</td>
</tr>
<tr>
<td>X16</td>
<td>0.967</td>
<td>0.355</td>
<td>0.006**</td>
</tr>
<tr>
<td>X17</td>
<td>-0.138</td>
<td>0.520</td>
<td>0.790</td>
</tr>
</tbody>
</table>

Log Likelihood Value = -83.54
LR $\chi^2$ Test (17) = 189.97
Probability $\chi^2 = 0.000$
Pseudo $R^2 = 0.532$
Total number of observations = 269

**Significance levels: p≤0.01
*Significance level: p≤0.05

4. DISCUSSION

The prevalence of TB was almost the same in both genders. Findings of the study show that males and females were equally vulnerable to TB. Moreover, most of the patients were young and of productive age. Our results are consistent with those of Gupta et al. (2011). They reported that in South India most of the patients were 21-40 years of age. Research by Narasimhan et al. (2013) and Bishai et al. (1998) concluded that TB was more common among youth. The study also revealed that these young patients had been in contact with other TB patients within their family. Most of the patients in the study area were married. This is due to the traditions of Khyber Pakhtunkhwa, where marriage at an early age is very common, particularly among women.

Patients of lower economic status are closely linked with TB. In our case, most of the patients (75%) of the total were living in kacha houses. In addition, these patients were wage labourers or belonged to poor farming families, which consequently increased their vulnerability to TB. Similar findings of house structure are reported by Cramm et al. (2011), who revealed that 51% of the TB patients in South Africa had poor housing quality (roofs leaked). Similarly, Gupta et al., (2011) reported that prevalence of TB is more common among the wage labourers in India. Average household size in the study was very high, and most of the patients were living in a joint family system. Results show that the more household members there are, the more likely it is that someone else will get infected by TB.

Similarly, the poor structure of houses and room sharing between patients and other family members increases the chance of contracting TB. Patients which had TB family history had 1.99 rooms on average per household, while families with no TB history had 3.28. This implies that the fewer the rooms, the greater the chance of infecting healthy family members. These patients also reported that their rooms had no proper ventilation. Schoeman et al. (1991) reported that most of the TB patients were sharing a room; however, the control group had the same situation. Therefore, our results contrast with their findings that larger household size and fewer rooms increase the probability of getting TB. Likewise, education is an important risk factor in the study area. Most of the respondents were illiterate or had a very low education level. When patients are better educated, they know better how to cope...
with TB and what precautionary measures to take. Our findings are consistent with Shafqaat and Jamil (2012) and Shetty et al. (2006), who revealed that most of the TB patients were illiterate in Pakistan and India respectively.

Poverty and low income are the root causes of TB (Creswell et al., 2011; Oxlade and Murray, 2012). Our findings show that most of the patients had very low household income. Their income was not sufficient to support family expenditures. As shown in Table 2, only 1/3 of the total patients’ families had formal sources of income, and many patients were thus unemployed and dependent. This problem becomes more severe when the TB patient is male, as male members are mostly the family breadwinners in study area. Our findings are consistent with Cramm et al., (2011), who claimed that 62% of their patients were unemployed. Consequently, these patients had low income levels or lived below the poverty line. A study conducted by Shafqaat and Jamil (2012), reported that most of the TB patients (60%) were living in extreme poverty in Pakistan. Our findings show that TB patients lack sufficient food in their house. The regression results show that food insufficiency is associated with TB family history, due to which they had low immunity. Boccia et al. (2011) revealed that TB was more prevalent among people with poor protein intake. Patients with other diseases were much fewer in number. However, diabetes and heart disease were found to be important risk factors in TB history. Patients who had already had these diseases were infected easily by Mycobacterium tuberculosis. Our findings are consistent with Gupta et al., (2011), who revealed that 30.92% of the patients had the most common and significant co-morbid conditions, followed by HIV at 10.63%. However, in our study no patients had HIV. Although there were few smokers in our study, it is one of the most important factors for TB. For example Murray et al. (2011), Slama et al. (2007) and Bates et al. (2007) revealed that smoking is associated with high TB prevalence. Our results of the regression analysis validate these studies in that patients who were smokers had TB family histories. The above findings show that socio-economic factors associated with TB in Pakistan are appearing as deterrents to the control and complete eradication of TB.

5. LIMITATIONS

The study is conducted in a district where most of the population is living in rural areas. Therefore, findings may vary in urban areas. The study excludes children TB patients; their inclusion in future studies may portray a different picture regarding risk factors and TB history within families.

6. CONCLUSION

After several decades’ struggle of the WHO and National Tuberculosis Program, this study has identified that in Pakistan, socio-economic factors are still very important in TB epidemiology. TB patients are mainly from the wage labour class, illiterate, low income, poorly constructed houses, and insufficient food. Low income and unemployment forces people to live in unventilated dwellings, which leads to the transfer of infectious diseases from person to person, forcing households into a vicious-circle of poverty and disease. The study suggests that to reach long-term TB control targets, appropriate interventions are needed to address the issues for those most at risk. The current TB control program needs to be formulated to target specific risk factors and poverty reduction strategies simultaneously for effective disease control. Proper health education for patients and awareness among the people, particularly for lower socio-economic classes, are urgently needed to break the vicious-circle of TB.

7. ACKNOWLEDGEMENTS
We would like to thank the participants of the study for their time and taking interest to share their data. We are also grateful to the District TB officer Dr. Sartaj, Lab technician Sabz Ali for their support during data collection. The first author accredits the support of the Higher Education Commission of Pakistan for the award of a Ph.D. scholarships. The authors also extend thanks to Mr. Ubaid Ali Lecturer GPGC Nowshera, for proof reading of the manuscript.

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The Perceptions of Home Gardening Zone Program and The Potential Impacts on Household Food Security

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Abstract

Introduction: One of the breakthrough efforts to increase dietary diversity that would lead to food security is the launching of home gardening zone (HGZ) program by Indonesia Ministry of Agriculture. Understanding the effect of the program on community could identify benefits and shortfalls that may be crucial to the success of it. The purpose of this study was to assess the reasons community gardeners participate in the home gardening zone program, as well as to explore the potential impacts such participation has on the community and household food security.

Methods: The study was conducted at Mojokrapak village, Tembelang district, Jombang regency, East Java, Indonesia between May-September 2015. Data were collected through ten individual in-depth interviews to gardeners, one focus group discussion to stakeholders and observation on home gardening zone (type and large of plants and animals). Data were analysed using the Thematic Content Analysis approach.

Results: Gardeners reported seed distribution and assistance by government as main reason for participating. There were some contributions of to household food security in aspects of food availability, food access and food consumption. Additionally, there was an improvement of communalism among gardeners as another benefit. Results obtained from the focus group discussion and observation concurred with the findings from the in-depth interviews. However, some gardeners expressed the need to acquire supports such as motivation and the availability of fertilizer in order to keep the program going.

Conclusion: Home gardening zone increased access to household food security and community nutrition. Findings from this study will hopefully serve to guide future quantitative research evaluating home gardening zone as a potentially food and nutrition security improvement intervention.

Keywords: Home Gardening Zone; Food Security; perceptions.

Introduction

Results from the National Basic Health Survey ("Riskesdas") (2013) showed that the number of under-five children suffering from underweight was still at large and it reached up to 19.6%. It showed an increase in comparison to 2010 which was 17.9%. Likewise, under-five children with stunting had gone up to a relatively high percentage with some upsurge by 37.3% in 2013. The percentages of undernutrition in Indonesia were almost as high as in a region in Ethiopia, and based on the study, it related to food insecurity (Motbainor, Worku, & Kumie, 2015).
The high and increasing rate of nutrition problems on under-five children calls for an immediate solution on the roots of the problems. In other words, solutions concerning nutrition problem need to involve sectors other than health affairs. In this case, it requires the involvement of the ministries of agriculture, public works, commerce, industries, education, etc.

Food security is built on four pillars: Food availability, food access, food use, and stability in food availability, access and utilization (FAO, 2006). One of the breakthrough efforts to increase food security is the establishment of home gardening zone program. The fundamental principles of the program include the utilization of vacant house yards into green house gardens that are designed for food security and food independence, food diversification based on local resources, food genetic resource conservation (plants, cattles, fish), and village seed gardens. This in turn will lead to the improvement of income and community prosperity (Indonesia Ministry of Agriculture, 2012).

The idea of home gardening zone program is actually not a new idea and has been implemented in several developed countries. The benefits of such similar programs have been proven through some research. Kortright and Wakefield (2011) found that planting food plant on the house yard contributed to food security at all income levels through nutritious food provision. Health and welfare were also found to have increased through the production of food. Another benefit from food planting on the house yard was indicated by Zick et. al (2013) where garden farmers were benefitted not only from the increase on fruit and vegetable consumption but also by the decrease of overweight and obesity rates in their community in comparison to other communities that did not implement food planting in their house environment.

In the past years, garden farmer communities have become an interesting research topic due to their potentials as a part of health intervention. Although published research on the efficacy of garden farmer communities have not surfaced, several recent studies showed the effectiveness of such an activity (Northrop, Wingo, & Ard, 2013). A survey conducted by Armstrong (2000) in Upstate New York, showed that the participants' reasons to join their community gardening were due to several premises. In this regard, the access availability to get fresh and new food resources, the need to consume natural food, and other health related reasons were the navigating motivations in participating in this community gardening. The study’s findings also showed that community gardening was able to become an effective strategy to empower, develop and promote health.

People’s perception that they are the implementors and benefit recipients of home gardening zone program is an important aspect to explore, particularly as a potential input for
a nutrition intervention, program evaluation and policy recommendations. Questions such as the reasons of why people implement program, whether the farmers have been benefitted with positive impacts from their efforts, as well as whether such program can improve family food security through family food provision and affordability are interesting and crucial to investigate. This study findings may constitute as preliminary research for the next nutrition intervention. Therefore, the research purpose in this study was to assess the reasons community gardeners participate in the home gardening zone program, as well as to explore the potential impacts such participation has on the community and household food security.

Methods

A Case study design was employed in this current study. A qualitative approach was used to explore the perceptions of participants regarding the reasons to participate and the impact of the program on community and household food security. The study was conducted in Mojokrapak Village, Tembelang District, Jombang Regency, East Java province, Indonesia, between May and September 2015. The home gardening zone program in this village is one of the best three in running the program in East Java province.

There were 10 gardeners and 7 stakeholders who had participated for this study. Gardeners had to be currently active in the Home Gardening Zone Program at Mojokrapak Village for at least a year and have a family. Meanwhile, the stakeholders consisted of village officials, community figures, and program counsellors. The selection of gardeners was based on the principles of appropriateness and sufficiency. The appropriateness was determined through the previously set criteria and it was considered adequate in providing information relevant to this research topic. Sufficiency was determined through data saturation. The data collection would be terminated when there was no new and further information needed.

In-depth interview and focus group discussion (FGD) were selected as the data collection methods to ensure that there was triangulation of methods of data collection. Triangulation of methods was applied to verify and confirm the credibility of the findings from the in-depth individual interviews. Observation was made to match the information from in-depth interview and focus group discussion. Additionally, an audio tape recorder was used to capture the participants’ views accurately.

Face to face individual interviews were conducted with 10 gardeners. Both the individual and focus group discussion were conducted in Indonesian language. The interview guide for gardeners contained the following questions:

1. Characteristics of participants
2. Reasons to become a participant in the Home Gardening Zone () program
3. How to gain knowledge and understanding of the program
4. Perception of ’s contribution to food availability
5. Perception of ’s contribution to food access
6. Perception of ’s contribution to food consumption
7. Perceptions about the most important in ’s contribution
8. Perceptions about other contributions of
9. Desires and expectations regarding the existence of the

The purpose of the in-dept interviews was to gather individual perspectives, while the focus group discussion was meant to provide a forum as a collective in order to confirm the finding from in-depth interview. After the in-depth interviews were complete, a focus group discussion was held. Observation were made after in depth interview and before FGD session. The FGD was attended by 7 participants and lasted for 45 minutes which was held at the village chief’s house. They included; (a) the village chief who was also the program counsellor, (b) the head of the village affair who also acted as the program counsellor, (c) chief of hamlet (a territory unit within the village) who was also program counsellor, (d) neighborhood chief who was also prominent community leader, (e) the core team members of the program, (f) the secretary of program, and (f) the treasurer of the program.

After the completion of the individual Interviews, focus group discussion and observation data were analysed with the thematic content analysis approach. The process involves analyzing transcripts, identifying themes from the transcripts and gathering together examples of those themes from the text. The thematic content analysis was ideal for this current study because the study involved the transcribing of data and coming up with themes which matched the data collected.

The research has received an ethical approval by the ethic commission of the Faculty of Public Health, Universitas Airlangga. Informed consents were explained and collected from the participants prior to their participation in this research.

Results

Demographics of study participants
Ten gardeners of participated in the study. All of them have participated in for 2 years. The gender was 100% female, and 60% of them ranged from 41–60 years old. Only 30% of gardeners graduated from senior high school and college. A half of them had family income between Rp 1.000.000-1.500.000 ($ 74-$111).

Reasons for Participation
The majority of participants revealed the reasons why they were willing to become participants. The first premise was because it was a program from the Ministry of Agriculture. Initially, there were officials from relevant agencies or departamento units who came to provide counseling, seeds and livestock to them.

“There used to be counseling from the district officials. I think it’s from the department of agriculture or its unit. There was some gathering and counseling at the time. They taught us how to do some seed germination. Everything has its own knowledge, right? Even if we are just the housewives, when there are activities like that we would join. It would add our knowledge too”.

Stake holders expressed views similar to those of the gardeners when asked about the reason of gardeners to participate in the program. However, some of them said there were additional reasons to join the program such as establishment to utilize a vacant land in front of their houses, improve family income, as well as revive a good custom from the past in the society.

“Basically the reason of forming is that we once had grant from the Food Security Board from the East Java Province. The grant was in the form of seeds, and livestock such as catfish, chickens and ducks too. So, in the beginning of 2012 we received the grant, from this onward we shared the grant to the community, we spread and developed the benefits of”.

The observation result showed that most participants planted kinds of vegetables such as eggplants, spinach and chilies and passion fruit as the most grown plants. Most plants grew well and there were new ones beginning to grow. Some participants kept livestock with the majority being chickens, ducks, catfish and goats as the most kept and bred livestock. All animals were in a healthy condition. All program participants possessed a garden area of less than 100 m².

**Potential Impact towards Food Security**

**Contribution to food availability**

Based on the data, the implementation of the program has demonstrated a number of benefits to families. In this regards, it contributed to household food availability. It was revealed from the results of the sessions of In-depth Interview and FGD. When the market price for the vegetables and fruit increased, the participants did not feel worried because they had edible vegetables and fruits in their house yards. Several kinds of vegetables, fruit and cattle were ready to harvest and were well managed in the program. The only hindrance is that the food supply may not be obtained on a daily basis. Rather, people must wait for the harvest season to come.
“Well, not every day. If it is not the harvest time yet then nothing. The crops from program can reduce our grocery expenses a bit. If we want to make “lodehan” (creamy vegetable soup) then we already have eggplants or others so we don’t need to buy more stuff.”

Contribution to food access

contribution to food access can be seen from the easy access experienced by the participants to obtain certain foodstuffs. In another instance, the contribution to food access can also be seen from the cost savings incurred when getting a certain food. The families could directly take them by picking the vegetables and fruits in their own gardens. The freshness of the produce was also maintained.

“[Although we] still need to buy for other ingredients that we don’t have, as for vegetables, we rarely buy now”

From FGD, stake holder said that crops were also sold for profit and the money can also be used to buy other ingredients such as sugar, rice or salt.

“The result (crop) is quite plentiful so we can sell some, there is a coordinator for that, and then we will have some income. In fact, we can use the profit money from the sales to buy other ingredients or materials”

Contribution to food consumption

The contributions towards consumption pattern of the participants can be seen from the habits of the participants who preferred cooking their own family food for health and cost-saving reasons. It also contributed to the habit of drinking fruit juice from crops.

“Healthy food, well the ones I cook with my own hands, I know where the ingredients come from. Every day, rice, vegetables, fish, whatever we have that day, pretty thrifty huh”.

“Well, yes, the whole family. Praise to God everybody likes it, if my children do not want to eat tomatoes, we can make juice, because everybody likes juices. The older folks would like to have the veggies for sambal (a kind of spicy salsa). It’s different, right? I mean it’s a different kind of consumption though the ingredients are the same kind“.

Additional benefit

There was community development among participants during the program. Many valued the social environment created by the community of and the interpersonal relationships that inevitably formed among participants and between participants and stakeholders.
“On harvest days, we cook and eat together, the whole family, of course I have put some aside for those who help me water the plants, and the rest would go to the market for sales”.

Some stakeholders said that they could take some vegetables or fruits from neighbour if they needed it for cook or make food and drink together for some events.

“When the participants did not have one kind of food, they were able to get it from a neighbour”.

“We have syrup, from the passion fruit that is. Sometimes if we have community public work we make passion fruit drink, tomato juice, and we drink them together.”

**Challenges in developing program**

Obstacles in implementing program come from internal and external factors. Internal factors such as busy schedules and unsteady personal drives of each participant may hinder the consistency of the program long term implementation. On the other hand, some external factors include, among others, the weather, children, and animal disruptions, pests, and lack of available fertilizer affecting the soil to be planted.

“Like I said before, the challenges come from ourselves, our own awareness, and we are talking about that there are plenty [reasons], let’s see and talk about daily needs or our own busy activities, they are endless. For instance, like right now. I need to close my stall, right? But we need to do this wholeheartedly because this is also important”

“caterpillars, grasshoppers, they eat the crop.”

“Weather, and pests, chickens, and kids too. You know when they go to school passing the plants, they often pluck out some of the small plants. I mean we don’t know [when it happened] but suddenly the plant would go dry. Sometimes they pick up raw fruits, the ones that are not yet ready to harvest, small fruits, they make toys out of them (the small fruits), and I guess those are some of the challenges “

“If we don’t have fertilizers then we are in trouble, really hard if we don’t have fertilizers.”

**Discussion**

The potential impacts of establishing program in Mojokrapak village, Tembelang, Jombang are in accordance with the core tenets of the initiative by the Ministry of Agriculture, which are to fulfil household needs for nutritious food and healthy living, to reduce costs on household expenses, to increase family income and well-being (Indonesia Ministry of Agriculture, 2012). These are also reasons to participate in the programs when officials from the local agricultural department came to the village to disseminate
the program and provide seeds to be developed into sustainable home gardening. In line with the results of this research, garden farmers in Birmingham, Alabama, US, follow a community gardening program because they have had a previous experience and in order to reduce expenses. Additionally, the community gardening provides fresh and organic food and by participating in the program, they increase their knowledge on food production (Northrop, Wingo, and Ard, 2013). Slightly different with the results of the research in Toronto, Canada, garden farmers who joined in a setting similar to program follow such activity to gain better access to certain organic foods which were less available in the market. These gardeners also wanted to learn. Other external factors include some environmental factors such as for hobbies and aesthetic purposes (Kortright & Wakefield, 2011).

Food security consists of three key pillars: food availability, food access, and food utilization. Based on the results of the FGD and in-depth interviews, HGZ program contributes to household food availability. This finding, however, is limited to some specific food products such as eggplants, tomatoes, chilies, passion fruits, bananas, papayas and certain types of livestock. The availability of food is significantly meaningful and helpful, especially when food or fresh produce prices soar. In terms of access to food, people have easier access for getting groceries, especially when they have an agreement to barter food products in their gardens with each other. Some people exchange the vegetable or fruits with others on the produce that is not available in their gardens with other people who have such food products. Community food availability is evident from the reduced costs incurred to get one or more of certain food products because they can be obtained by picking in their own gardens. Some crops are sold and can also be used to buy other food ingredients such as sugar, rice or salt. The presence of garden plants make the community become more passionate to consume vegetables they pick from their own garden while still fresh. In addition, they also recognize the benefits of organic vegetables as they grow these themselves. They also prefer to eat their own food at home rather than buying processed or instant products or buying food outside their homes. The research results is in line with Community Gardening Project conducted by Carney et al. (2012) in the Hispanic farmer community which showed an increase in the frequency of daily vegetable consumption for children and adults, as well as reduced anxiety coming from not having money to buy food.

One of the results of this research also shows that in addition to contributing to food security, it appears that communality between HGZ participants increases as well. In addition to having vegetables and fruit crops in each garden, the participants also grow the plants for common and shared interest and goal. They aligned their plant and harvest
times together and scheduled communal plant watering. The result can mutually be used
while some can be shared for food supplies in the Nutrition Recovery Park managed by
the women and mothers’ organization (PKK). Communal ventures and managed,
people can enjoy the crop together. This communalism also occurs in community
gardening research conducted by Litt et al. (2011), where a neighborhood can affect
individual consuming behavior and can be used as a form of a unique intervention to
narrow the gap between society members and increase their opportunities in locations
where plants are grown together to obtain better nutritious food.

However, the sustainability of HGZ program is not free from obstacles. The
challenges of the HGZ program implementation in Mojokrapak Village, Tembelang
District, Jombang include the busy schedules of the participants. They stated that they
were often too preoccupied with daily activities, lack of motivation and perseverance in
maintaining the livelihood of the plants and the unavailability of fertilizers. This is
relatively easier challenges in comparison to ones faced by farmers in three villages in
Nkokonbe, South Africa where some of them were lacking of awareness to improve
farming practices and techniques, strained capital, and strangling in debt interests
(Adekunle, 2014). According to Indonesia Ministry of Agriculture (2012), the
sustainability of HGZ program is highly dependent on several aspects. They include the
personal drive and motivation from the HGZ participants, the benefits gained, commodity
volume and type rationalization, adequate seed availability, periodic counseling, financial
support, and access to markets.

Conclusion
The main reasons of all of the participants in implementing HGZ was initially because it is a
government grant program. The government offers seeds, guidance, and counseling on
agricultural techniques program. The HGZ contributes to the availability, affordability, and
household consumption of food, especially vegetables, fruit and certain types of livestock. In
addition, the implementation of HGZ also gives an impact on the improvement of
communalism among HGZ participants in the village. HGZ participants face challenges such
as having too little time or being too preoccupied with daily routines, lacking in motivation,
lack of persistence in sustaining the plants’ livelihood, as well as the unavailability of
fertilizers. Based on the findings, suggestions include the importance to increase the types of
vegetables and fruits grown, as well as to enhance the diversity of cattle breeding especially
for animal-sourced food. In addition, supports from local authorities are required for the
development of organic fertilizer management and to maintain enthusiasm to continue
planting in their gardens.
REFERENCES


EVALUATING THE SEXUAL NURSING INTERVENTIONS IN ALLEVIATING SEXUAL DYSFUNCTIONS OF INDONESIAN WOMEN WITH POST-CHEMORADIATION CERVICAL CANCER: RESULT FROM QUANTITATIVE AND QUALITATIVE DATA

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ABSTRACT

Sexual dysfunction is one of the health problems faced by survivors of cervical cancer and needs nursing intervention. This research was aimed at determining the effectivity of sexual nursing intervention in alleviating sexual dysfunction in post-chemoradiation cervical cancer survivors. The data were collected using the Female Sexual Function Index (FSFI) with 104 survivors. Moreover, to enrich the result of quantitative data, semi-structured in depth interviews were carried with 10 couples of these 104 survivors who shared their experiences after following the intervention. The sexual nursing intervention was given in 3 sessions and evaluated 4 weeks afterwards. The intervention was able to improve pain during sexual intercourse and sexual satisfaction. There were no statistically significant differences in desire, arousal, lubrication, and orgasm issues in the intervention group as compared to those of the control group. This sexual nursing intervention can be a part of supportive nursing services and may become one of the important aspects of standard nursing service for cancer in Indonesia.

Keywords: Cervical cancer; Sexual dysfunction; Sexual nursing intervention

1. INTRODUCTION

Cervical cancer is a major trigger of cancer survivorship phenomenon in the cancer survivors, particularly phenomena of sexuality and intimacy problems with their spouses. The phenomenon is usually experienced by the survivors as cervix is a special reproductive organ that characterizes a woman’s sexuality. Sexual dysfunction in cervical cancer patients due to the effects of cervical cancer treatment may affect the quality of life in women. Numerous studies reported that cervical cancer survivors experience various sexuality problems, either due to the treatment or by the cancer itself, which bring bad impacts on their quality of life (Wenzel 2005; Burns et al. 2007; Greenwald & McCorkle 2008; Klee, et al. 2000). Cancer treatment has been proven to cause various long-term sexuality problems, either for the cancer survivors or their spouses (Donovan 2007; Ekwall 2003; Wilmoth & Spinelli 2000; Donovan et al. 2007; Klee et al. 2000). Cervical cancer survivors may experience various sexuality problems such as infertility, and vaginal damages including shortening of vaginal length, reduced vaginal elasticity, lesser vaginal lubrication, disorder of sexual arousal, dyspareunia and problems of achieving orgasm (Cesaretti et al. 2007; Reese et al. 2009). Other side effects of cancer treatments are problems of sexual satisfaction, marital intimacy, domestic
violence by their husbands, lack of self-esteem, problems of self-image and decrease in feeling of feminity (Bergmark et al 2005; Brotto et al. 2008; Wilmoth 2006). Moreover, sexual dysfunction experienced by cancer survivors are also reported to be a threat of harmonizing marital relationship. A husband’s sexual dissatisfaction against his wife, who experiences sexual dysfunction, is a threat that may exacerbate the harmonic marital relationship. It may cause a cheating husband and a divorce, i.e. the husband divorces his spouse as he gets into a new marriage with another women (Badr H & C 2009; Sheppard & Ely 2008). Syse and Kravdal (2007) even reported that there is a significant number of divorce in women experiencing cervical cancer. According to the report, the divorce rate in women due to cervical cancer is the highest rate than the divorce rate in women with other cancers, which is about 40%.

Those sexuality problems are not easy to overcome by the women and their spouses after cervical cancer treatment. They need education and information to solve sexuality problems following the cervical cancer treatment (Hautamaki-Lamminen et al. 2013; Jensen et al. 2003; Rasmusson & Thome 2008; Sheppard & Ely 2008). More evidences are provided by a study conducted by De Groot, et. al. (2005) and Jun, et.al. (2011) which also reported that patients and their spouses need some explanation about restoring the sexual relationship following cancer treatment.

Various nursing care interventions have been developed to overcome sexual dysfunction and to promote sexual health for patients with gynecologic cancers. Nursing care intervention on sexuality provides supports to women and their spouses through giving educational information and emotional support, providing specific counseling to overcome sexual dysfunction due to side effects of cancer treatment, assisting the women and their spouses to adapt against physical and psychological changes that are being experienced and helping them to regain self-confidence in women following the cancer treatment (Jun et al, 2011).

A counselling provided by a nurse means that the nurse gives information, assists patients in making a decision, helps the clients to execute the decision and provides guidance; therefore, the patient’s autonomy on the instructed aspects has become an indicator of successful nursing care invention that had been given (Gamel et al. 2000; Butler & Banfield 2001; Algier & Kav 2008). In a study conducted by Maughan & Clarke (2001) they evaluated the effectiveness of counselling provided by specialist nurses and they found that psychosexual counseling performed by those nurses has significantly improved sexual function in the group of women who received counselling compare to the group without counseling.

Other studies have reported that intervention of educational counseling has provided scientific evidences that it may improve sexual dysfunction, reduce anxiety and depression and it can ultimately improve the quality of life of women following the cervical cancer treatment. For example, Brotto et al (2008) reported that the effectiveness of counseling performed by a psychologist has brought 57% of subjects to get their sexual relationship again with increased frequency of sexual activity; however, it does not reflect changes of sexual desire. Powell et al. (2008) reported the effectiveness of 3-hour counseling intervention to improve vaginal
dilatation in women following the radiation treatment for gynecologic cancer. Moreover, information and education provided by health care professionals can reduce anxiety in patients following radiation cancer treatment (Faithfull & White 2008). Similar study results are also reported by Powell et al. (2008) demonstrating that a brief psychosocial intervention in the outpatient unit for women following gynecologic cancer treatment has been proven to reduce anxiety and depression as well as to increase the quality of life in women.

In Indonesia, a little has been studied in reported the presence of sexual dysfunction experienced by cervical cancer survivors and its impact on their marital relationship. Moreover, no standard has been established on the nursing care service in Indonesia that promotes sexual health for cancer patients, particularly for those with gynecologic cancers. Various nursing care interventions on sexuality through education and counseling, which are parts of standard nursing care service, has not been optimally executed by oncologic nurses in Indonesia. This study were to evaluate the sexual nursing intervention for cervical cancer survivors to overcome sexual dysfunction, either using quantitative or qualitative method.

2. METHODS

Design, setting, and sample
The design of this study was a quasi-experimental to evaluate of sexual nursing intervention on sexual function among Indonesian cervical cancer survivors. Data were collected from Cipto Mangunkusumo Hospital, Jakarta between June 2010 and April 2011. The eligibility criteria were: (1) married women between 35-60 years of age and living with their spouses, (2) cervical cancer stage II to III, (3) post-chemoradiation survivor within 1 to 2 years and (4) women who were still sexually active. During the process of data collection, there were 125 women candidates. The results of selection using the inclusion criteria revealed that 17 women did not participate due to various reasons, i.e. 3 women already had no husband, 5 women were not diagnosed with cervical cancer, 4 women had complications and the other 4 women were loss to follow-up since they had moved to areas outside Java. The number of respondents who participated in the study until the data collection had been completed was 104 couple of respondents. About 53 couples were categorized into the intervention group and 51 couples were included in the control group. Moreover, ten couples were willing to share their experiences openly and they were interviewed following the intervention in order to enrich and strengthen the results of quantitative data that had been obtained.

Instruments
The format of personal information was developed by investigators to obtain characteristic demographic data of the respondents. Female Sexual Function Index (FSFI) by Meston (2000) used to measure female sexual function within a six-week afterward. FSFI consists of 19 items that evaluate six subscales, i.e. sexual desire, arousal, lubrication, orgasm, satisfaction, and pain. The maximum score of each subscale is 6, and the maximum total score is 36. The FSFI was translated into Indonesian language by International Language Institute of University of Indonesia.
The validity test on the content was conducted in this study through an analysis on the results of a trial conducted in 40 respondents using correlation technique of Pearson Product Moment at 5% level of significance of 0.320, i.e. by comparing the calculated R-value for each question item with the table R-value. The results of validity test on FSFI questionnaire content included the calculated R-value with a range of 0.333-0.689. Moreover, the reliability test of FSFI questionnaire had a Cronbach’s Alpha of 0.853 for the total scale. Interview Guidelines was developed by the investigator herself to obtain qualitative data from the respondents and their spouse about their experiences during they followed the intervention.

**Data collection**

The intervention group received the sexual nursing intervention which delivered to the 6 groups of up to 8-10 couples each to maximize the small-group dynamics and provided at the hospital by the main investigator to ensure consistency. The intervention carried out in 3 weekly 2-hour sessions and all sessions were performed with patient and spouse together. Furthermore, the intervention group was given chance to practice the intervention and they could have individual counseling session by phone whenever necessary in the fourth week after they had completed the intervention. The control group received usual care provided at the hospital; while the intervention group had sexual nursing care intervention. The intervention group completed the FSFI questionnaire again in the fourth week after they had completed all the materials obtained; which was at the same time of their health care control visit to their doctors after having the chemoradiation. Moreover, the investigator performed interviews with 10 couples in the intervention group who were willing to share their experiences about the intervention program. The interviews were conducted by the main investigator and each interview was tape-recorded with permission and lasted approximately 100 min. Similar procedures were also performed for subjects in the control group when they filled out the FSFI questionnaire again.

**Intervention**

The material of education was provided in the form of booklets and flip charts and was given by giving education and counseling, providing guidance, and suggestion to perform physical exercise and communication as well as providing K-Y gel with an explanation about the advantage and instruction of how to use the K-Y gel. The content of all materials given to the respondents had been verified by an expert panel consisted of experts in radiotherapy, oncology, oncology nursing care, public health and sexology.

**Ethical considerations**

The ethical clearance was granted by the Ethical Committee at the Faculty of Medicine, University of Indonesia. The investigator provided written information and explained the objectives and procedures of the study, including the risk and benefit of participating the study. Respondents were also asked for their willingness to sign the consent form as a proof that they were willing to participate in the study.

**Data analysis**
A descriptive analysis was performed to evaluate the characteristics of respondents in the present study. The statistical analysis used for categorical data was Wilcoxon test; while for mean scores of the following variables - including sexual desire, arousal, lubrication, orgasm, satisfaction, and pain – were evaluated using the t-test in order to compare those scores between before and after the intervention. Furthermore, qualitative data obtained from the interviews were evaluated through a thematic analysis using a method proposed by Collaizi (1978) to create the theme.

1. RESULTS AND DISCUSSIONS

3.1. RESULTS

3.1.1. Results from the quantitative data

Demographic data

The mean age of women and their husbands was more than 40 years indicating that both were already at advanced reproductive age. Approximately, the women had 3 children with 20 years of marriage. About 54% of women had been graduated from Junior and Senior High School; while for their husbands, about 70% had been graduated from Junior and Senior High School. About 80% of women were stay-home mother; while for the husbands, about 53% were working with unpredictable income. Further details are presented in table 1.

Table 1: Demographic Data of the Intervention and control group

<table>
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<tr>
<th>Variabel</th>
<th>Intervention group</th>
<th>Control group</th>
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<td>SD</td>
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<td>Respondent’s Age</td>
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<td>Junior and Senior high school</td>
<td>50,9</td>
<td>52,9</td>
<td></td>
</tr>
<tr>
<td>Respondent’s Occupation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housewife</td>
<td>81,1</td>
<td>78,4</td>
<td></td>
</tr>
<tr>
<td>Working out the side the home</td>
<td>18,9</td>
<td>21,6</td>
<td></td>
</tr>
<tr>
<td>Husband’s Age</td>
<td>49,52</td>
<td>6,24</td>
<td>48,74</td>
</tr>
<tr>
<td>Husband’s Educational level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary School</td>
<td>22,60</td>
<td>19,40</td>
<td></td>
</tr>
<tr>
<td>Junior and Senior High School</td>
<td>77,40</td>
<td>70,60</td>
<td></td>
</tr>
<tr>
<td>Husband’s Occupation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worker</td>
<td>52,80</td>
<td>52,90</td>
<td></td>
</tr>
<tr>
<td>Employee</td>
<td>47,20</td>
<td>47,10</td>
<td></td>
</tr>
</tbody>
</table>
The Effect of Sexual Nursing Care Intervention on Improved Sexuality Function

Statistical analysis showed that the mean score of pain during sexual intercourse and satisfaction were significantly different between the intervention and the control group (p < 0.05). In addition, the other variables of vaginal lubrication, sexual desire, arousal and orgasm did not statistically show any significant difference (p > 0.05) between the intervention and the control group after the intervention had been performed.

Table 2: Comparison of mean FSFI intervention group (n=53) and control group (n=51)

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Intervention group</th>
<th>Control group</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\bar{X}$</td>
<td>SD</td>
<td>$\bar{X}$</td>
</tr>
<tr>
<td>Desire</td>
<td>3.88</td>
<td>1.04</td>
<td>4.04</td>
</tr>
<tr>
<td>Arousal</td>
<td>4.05</td>
<td>1.01</td>
<td>4.27</td>
</tr>
<tr>
<td>Lubrication</td>
<td>4.12</td>
<td>0.88</td>
<td>3.87</td>
</tr>
<tr>
<td>Orgasm</td>
<td>3.91</td>
<td>0.98</td>
<td>3.83</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>4.58</td>
<td>0.34</td>
<td>3.91</td>
</tr>
<tr>
<td>Pain</td>
<td>4.62</td>
<td>0.70</td>
<td>3.61</td>
</tr>
</tbody>
</table>

*P < 0.05, SD standard deviation

3.2 Results from the qualitative data

Alleviated pain during sexual intercourse

Sexual nursing interventions were found to have impact in decreasing pain during sexual intercourse. Two of ten participants stated their pain was alleviated. The interview revealed that various ways have been tried by the women and their spouse to reduce this symptoms. These ways include changing the position of sexual intercourse, practicing Kegel exercises, doing relaxation, and using the lubricant.

"......... Now the pain is reduced, Ma’am, it is not dry anymore. Now it’s not really dry, and I often perform the prone or side position right now, because it made my husband easier and it helped me to get relaxed first so it wasn’t so painful...........(P1)".

Still lack of desire for sex

Women in this study shared various reasons of lack of desire for sex including various feeling of fear such as fear of bleeding and fear of cancer relapse. All the women stated that they have desire for sex because obtained an explanation of the importance of having sexual intercourse soon after the cancer treatment for the sake of their own reproductive health. They also expressed an immense variety of other reasons: carrying out the sexual duty as a wife, being afraid of making sin for disobeying the duties as a wife, making the husband happy, expressing gratitude to
the husband and having a sense of pity for her husband. The following statement were the experiences from a woman:

"...... if there is any interest it was because I fear of my vagina being narrowed ....... as you and the doctor said.....the other reason was ...... for fulfilling my obligation .... as a wife ........ if I don’t serve my husband, I am afraid of having sin...... (P1) ".

While interviews with the husbands revealed some other causes of lack of desire for sex, such as feeling pity to their wife, afraid to get hurt their wife, afraid of cancer relapse, as well as responding to his wife’s declining sex interest. Here are an example of a couple’s phrases:

“...........my (sexual) desire has also reduced... not to mention that I’m afraid that my wife will be ill again.... Now, I feel pity whenever I see her.... She also has reduced (sexual) desire.... So, I’m also being affected by that.....(P9*)”.

The two husbands stated that age is the reason; they did not put sexual issue as a priority since their wives’ health and safety are more important. Seven husbands told that their wives only tried to fulfill the duty as a wife and had so many excuses to initiate the sexual activity and hence it affected their sexual desire for sex. The following is statement of a husband’s experience on lack of desire for sex:

“.........I am now experiencing reduced desire since the responses from my wife is also lack of desire.... It seems that she would only fulfill her duty as a wife if we must have sexual intercourse.... .... (P2*)”.

Unlike the others, one husband told about his lack of desire for sex because currently he experienced fatigue for taking care of his wife and claimed that his wife is now still requires care and attention from himself to stay healthy. For him, this is the time to adjust to the sexual problems experienced by his wife as stated in the following expression:

"......... I really might be feeling tired because I had to take care of her during therapy, so I was rarely thinking about sexual intercourse. I still feel like she is still sick, so I still need to pay attention to her health .......... like what you said, I should be able to adjust to ...... so I would rather said ....my "night life " has changed .... (P1 *)".

The interesting thing of this study results was that 4 of 10 husbands express their feelings that they attempted to increase the sexual interest and passion of their wives. They sometimes managed to persuade their wives. The following is an expression one husbands in this study.

" I asked her to watch a movie that I have, so she could be restimulated........ ready again ......... ha ha ... not bad, I did it......I made my wife want an intercourse ...... even though she said it was still a bit sore. okay .... it was oke, wasn’t it ...? (P7 *) ".

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Getting Satisfaction with overall life

All women in this study reported that they got satisfied with overall life since they were still able to fulfill the sexual needs of their husbands, could enjoy the intimacy with their husbands, could have a “normal” sexual activity just like the normal women, they could still enjoy their function as mothers, they felt that their husbands and children still need them, and felt being loved by their husbands, families, close friends and with their husbands, they had a closer emotional relationship.

“........well.......now, what I am thinking about is how to serve my husband, that”s all, and I would be happy......still have a role as a wife and many neighbors are so concerned about my condition, which made me feel that I”m still being loved by my husband and that has made me happy. I used to like a "lover", now, it is like "a friend of life", and he is so concerned about my health, we are getting closer emotionally (P9)”.

3.2.DISCUSSION

Respondents in the intervention group had achieved integration of improved sexual dysfunction and able to overcome the sexual dysfunction after the intervention had been performed. The respondents had known various methods to overcome the problems of lubrication, pain during sexual intercourse and they also had known the method to bring the desire and arousal for sex on as well as the effort to reach orgasm and sexual satisfaction.

Results of statistical analysis in this study have provided evidences that sexual nursing care intervention has produced significant improvement on pain during sexual intercourse; however, it did not show significant improvement on vaginal lubrication. The condition of unimproved vaginal lubrication was further supported by the age of the women in this study, which was between the range of 42-52 years; which is the period of perimenopause that may exaggerate the development of reduced vaginal lubrication. It is similar to results found by Tang et al (1996) and Cleary and Hegarty (2008) who also reported women with a complaint of difficulty in reaching orgasm due to dry vaginal condition following the radiation therapy and their age near the menopause period.

Various studies associated with the utilization of non-pharmacological therapy to overcome sexual problems have been reported extensively in literature reviews and they support the effectiveness the results of intervention performed in this study. The use of husband-and-wife communication therapy, other interventions such as Kegel exercise, sense focus exercise and counseling on sexuality (Rowland & Incrocci 2008; Robertson 2005; Van de Wiel 1990) have been proven to be effective to overcome the problems on sexuality. Those interventions have also been used in our study.

Still lack of desire and arousal for sex following the cancer treatment is a common problem experienced by women in this study. After sexual nursing care intervention
had been performed, there was no improvement in terms of sexual desire and arousal in the intervention group. It can be explained as the sexual desire and arousal are emotional issues and the improvement needs a lot of time since they are associated with altered individual behavior on their recent condition on sexuality (Derzko et al. 2007).

Most husbands also had sexual problems, i.e. lack of desire for sex and satisfaction after their wives had received cancer treatment. The phenomenon of sexual problem experienced by the husbands in this study can be explained as it is basically the form of support they provided for their wife. It is obvious since the results of interview with the husbands showed that they did not want to make their wife suffer again when the wife expressed the complaint of pain and they also stated that their wife’s health is more important than their sexual needs, which proved the support from the husbands to their wife. This finding is supported by explanation from (Maughan et al. 2002; Juraskova et al. 2003; Cleary & Hegarty 2011) demonstrating that the source of providing support from husbands to their wife can be a problem and cause negative impact to himself during the process of providing the support itself, which means that when the husbands have a complaint of afraid to have sexual intercourse from their wife, they tend to automatically suppress their desire and emotion. The results of our study are consistent with those reported by previous studies (Juraskova et al. 2003; Maughan et al. 2002; Van de Wiel 1990). These also have been reported by Stead et al (2007) who found that as many as 42% husbands experienced lack of desire for sex. Friedman et al (2010) reported the same results, which found 14% husbands with lack of desire for sex following the cancer treatment of their wife.

One of the causes for lack of desire for sex and satisfaction of the husbands is due to the responses of their wife who experience loss of sexual desire. However, on the other hand, the husbands tried to help their wife to have the sexual interest and desire back following the treatment. The results of sexual nursing care intervention in this study have facilitated the needs of the husbands to be able to help their wife. It found that the husbands have provided full support for the safety and health recovery of their wives; although on the other hand, they have lack of desire for sex and satisfaction. They stated the reason is their wife’s health and safety is a major priority compared to the fulfillment of their sexual needs. Regarding this issue, the results of interview also found that there were various fears faced by the husbands such as fear of losing their wife, fear that no one will take care of their children and fear of cancer relapse. Similar results were also reported in the study conducted by (Fletcher. et.al. 2010). Studies conducted by (Akyuz et al. 2008) have also reported the same findings that the husbands avoided to have sexual intercourse with their wife because they were afraid to get hurt them following the cancer treatment. Moreover, a study conducted by Hawkins et al (2009) also reported the same fact, i.e. 79% men experienced lack of desire for sex and frequency of sexual activity after their spouses undergone cancer treatment. The study found various reasons expressed by the husbands that lack of desire for sex was caused by the fatigue felt when they take care of their spouse during the therapy and until now they still put their wife as a patient instead of a sexual partner. Of various reasons, the husbands in our study have also mentioned that now they can...
feel that their wife still needs their attention and their care. The results of our study have also found that sexual satisfaction measured in this study was different between both groups. The intervention group showed improved sexual satisfaction and it was significantly different compared to the control group. Similar to the effort to reduce pain during sexual intercourse, the interview with couples in the intervention group revealed that they used various methods they learned from nursing care intervention to reduce pain during sexual intercourse, such as using the relaxation technique by doing the touching stimulation and longer foreplay, to have various sexual position and using the K-Y gel. Those methods have also been proven to be effective as shown by other studies on the development of psychosexual educational intervention (Cleary & Hegarty 2011; Robertson 2005; Rowland & Incrocci 2008; Jeffries et al. 2006).

The women told that satisfaction of marital relationship was felt because they were still able to serve the sexual needs of their partners, to perform their duties as wives, felt that they were still loved by their husbands, could still show their compassion to their partners and they were satisfied because they had survived from the cancer. Such findings were supported by Rowland and Incrocci (2008) that in general, the sexual satisfaction in women is more determined by their emotional attachment, either physically or psychologically with their partners than the amount of organism that they have reached. This study results also found the data that sexual satisfaction of the women did not derive from personal satisfaction, which gave them pleasure; but it came from how they could perform their obligations to their partner. The condition is also highly correlated with the culture of Asian women, who are generally regard that the satisfaction of marital relationship is all about how they can get children and fulfill their duties to their partners.

1. CONCLUSION
Providing nursing care intervention on sexuality can facilitate the improvement of sexual dysfunction symptom in the survivors and their spouses. The condition of improvement comes true when the respondents and their spouses show a reaction that they can overcome the symptom of dysfunction that they have been experienced. Moreover, adaptive responses are demonstrated by the respondents through an achievement of adaptation against sexual changes, which is the accomplishment of integration, reduced various symptoms of sexual dysfunction through improvement in knowledge. It indicates that the nursing care service in the form of providing educational counseling on sexuality can be part of standard of oncology nursing practice as it has been proven to be able to facilitate one of alternatives to overcome symptoms of sexual dysfunction for the survivors and their spouses.

2. ACKNOWLEDGEMENT
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6. REFERENCES


SITUATION ANALYSIS OF COMMUNICABLE DISEASES AT CIMAH CITY
WEST JAVA PROVINCE 2015

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ABSTRACT

A situation analysis is an assessment of the current health situation and fundamental to designing and updating national policies, strategies, and plans. In 2015, communicable diseases in Cimahi City were still considered high compared to indicators of Health Ministry's Strategic Plan. Incidence of DHF was 135/100,000 population, prevalence of tuberculosis was 224/100,000 population, and incidence of measles was 8.35/100,000 population. The assessment was conducted to identify communicable diseases problem, determine priorities, identify causes of the prioritized problem, and suggest recommendations. This assessment used quantitative and qualitative approaches by reviewing the communicable diseases reports and interviewing the program managers of communicable disease control. The Hanlon Method with the Basic Priority Rating System (BPRS) was conducted through brainstorming with associated officials and program managers to determine priority issues. Several communicable diseases issues were identified in Cimahi City. Incidence of DHF in 2015 increased by 54% from 2014 and endemic in all areas. Prevalence of tuberculosis increased from 218/100,000 population in 2014 to 224/100,000 population in 2015. Measles cases in 2015 increased by 44.1% compared to 2013 (baseline). HIV/AIDS increased from 31 cases in 2013 to 40 cases in 2015. Two leprosy cases have been found each in 2014 and 2015. Based on BPRS method, the following results were obtained: the first priority was DHF, second priority was tuberculosis, and third priority was measles. DHF was the most common communicable diseases problem at Cimahi City. This is due to lack of monitoring of Mosquito Breeding Places Control (PSN) has not been implemented because of lack of manpower, surveillance was not optimal, and lack of health promotion. Based on this evidence, we recommended to the Community Health Center officers to conduct the larvae monitoring every 3 months to measure the success of PSN, optimize surveillance, and conduct health promotion to increase community participation.

Keywords: Assessment; Cimahi City; Communicable diseases; Priority setting

INTRODUCTION

Health problems vary widely from one region to another, depending on the condition of the area. To know the health problem in an area, it is necessary to analyze the factors that influence the health status of the community in the area, by looking at the impacts of mortality rate, morbidity rate, achievement of the program, and the environmental risk factors and the existing health program. With many burden of health problems and limited resources make it difficult to handle them all at the same time. It is necessary to determine what issues need to be addressed on a priority scale by considering the urgency of existing health
problems, the magnitude of the impacts that can be generated if not addressed, and how much
benefit is obtained if the prevention program is implemented now and in the future.
WHO defines a health specific situation analysis as an assessment of the current health
situation and fundamental to designing and updating national policies, strategies and plans. A
strong situation analysis is not just a collection of facts describing the epidemiology,
demography and health status of the population. Instead, it should be comprehensive,
enscaping the full range of current and potential future health issues and their
determinants. It should also assess the current situation as compared to the expectations and
needs of the country. Such a situation analysis can then serve as the basis for setting priorities
to be addressed in the policy, strategy or plan through the process of a broad, inclusive policy
dialogue. That is why necessary to conduct sound situation analyses and inclusive priority
setting processes by, for example, facilitating the bringing together of stakeholders and
domestic expertise to build an evidence-based consensus. The comprehensive and inclusive
process should vastly improve the resulting policy, strategy, or plan. (World Health
Organization, 2017)
Situation analysis is one of the activities undertaken in the field in determining health
problems and prioritizing problems in the field by using a certain way and approach.
Situation analysis is part of the problem solving cycle or is part of the planning cycle. A
planning process or problem solving cycle requires sustainable steps that include situational
analysis, specific problem formulation, problem prioritization, goal setting, selecting the best
alternative, outlining the best alternative into operational plans and implement the activity
plan.
In 2015, communicable diseases in Cimahi City were still considered high compared to
indicators of Health Ministry's Strategic Plan. Incidence of Dengue Hemorrhagic Fever
(DHF) was 135/100,000 population, prevalence of tuberculosis was 224/100,000 population,
and incidence of measles was 8.35/100,000 population. Diarrhea cases was 17,795 cases or
30.3/100,000 population. There was found diphtheria case and leprosy case. (Dinas
Kesehatan Kota Cimahi, 2016)
The description shows that Cimahi City still has some communicable disease problems. In
addition to some communicable diseases morbidity that still exceeds the national indicator,
Cimahi City also has a population of 586,580 by 2015 with an area of 40.2 km² with a
population density of 14,592 population/km². (Badan Pusat Statistik Kota Cimahi, 2015).
Cimahi is the third most populous city in Indonesia after Jakarta and Bandung City.
Population mobility in Cimahi City is also quite high which is characterized by good
accessibility with 2 access tolls and railway station. These conditions indicate that Cimahi
City is vulnerable to communicable disease problems. This situation analysis aimed to
identify communicable diseases problem, determine priorities, identify causes of priority
problem, and suggest recommendations.

2. METHODS

Study Design
This assessment was conducted using descriptive study with quantitative and qualitative
approaches. Quantitative approach used to identify communicable diseases problems by
comparing the current issue (mortality and morbidity of communicable diseases) with the
indicators of Health Ministry's Strategic Plan, and reviewed trend of communicable diseases.
Qualitative approach was conducted through brainstorming with officials and staff of
communicable diseases control programs at Health Office and Community Health Center of
Cimahi City to identify the causes of the problem prioritized and determining alternative intervention.

**Data Collection**
Data collection for the study was carried out from January to March 2017. The first step in data collection was collecting quantitative data about morbidity and mortality of communicable diseases; these were obtained mainly through document reviews in the district health office of Cimahi City. This data incudes programs coverage related of communicable diseases like vaccine coverage, healthy life behaviour coverage, and public places that appropriate requirements coverage. The other documents reviews were obtained online through the statistics office website about demography and geography data. The second step involved discussion with with 3 officials and 5 staff of communicable diseases control programs from district health office through the brainstorming to obtain qualitative data about causes of priority issues and alternative intervention. The people who involved in this brainstorming includes 3 staff from Community Health Center from 3 sub districts in Cimahi City.

**Data Analysis**
The first step, we described the morbidity and mortality data of communicable diseases in the last 3 years and compare them with the indicators of Health Ministry's Strategic Plan. The morbidity and mortality data also distributed based on the working area of the Community Health Center. The coverage of programs related to communicable diseases has also been described in the last 3 years. We then described the demographic and geography data of Cimahi last year based on the working area of the Community Health Center. All the information was brought in the brainstorming to be discussed and formulated in the problem statements. The second step, establishing the priority of communicable disease problems using Hanlon method.

The Hanlon Method with the Basic Priority Rating System (BPRS) was conducted to quantify communicable diseases problems and determining priority problem. Priority setting conducted by scoring for three sets of variables on weight or magnitude of the problem, seriousness or severity of the problem, and effectiveness of intervention for each the problems. The Advantage of this method is the desired outcome is an objective list of health priorities based on baseline data and numerical values. (World Health Organization, 2016). We then made a list of problem statements which have been identified, on a scale from zero through ten, we rated each problem statements on the following three criteria that shown in the columns of Table 1.

**Table 1. Rating of the Problem Statements**

<table>
<thead>
<tr>
<th>Problem Statements</th>
<th>Magnitude of the Problem</th>
<th>Seriousness of the Problem</th>
<th>Effectiveness of Interventions</th>
<th>Priority Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem statement 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Problem statement 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Problem statement 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(all the problem statements)</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
After all the problem statements have been rated by the Hanlon criteria, we used the ‘PEARL’ Test which consists of propriety, economics, acceptability, resources, and legality component, to screen out health problems based on the following feasibility factors:

- Propriety, is a program for the health problem suitable with program in the district health office?
- Economics, does it make economic sense to address the problem? Are there economic consequences if a problem is not carried out?
- Acceptability, does the community accept/want an intervention of the program?
- Resources, does the district government will provide funds to conduct the program?
- Legality, are there any regulations that allow program activities to be implemented?

We rate each problem statement following the five feasibility factors with “0” if unfeasible and “1” if feasible. All problem statements that unfeasible was eliminated. After all problem statements feasible was rated following the Hanlon criteria, calculate the priority scores using the following formula:

\[ D = [A + (2xB)]C \]  

Where:
- A = Magnitude of the problem statement
- B = Seriousness of the problem statement
- C = Effectiveness of interventions
- D = Priority score

Based on the priority scores that was calculated in the Hanlon method, we assigned ranks to all problem statements from the highest priority score as the first priority and so on.

3. RESULTS AND DISCUSSION

Table 2. Trend of Communicable Diseases in 2013 – 2015

<table>
<thead>
<tr>
<th>No</th>
<th>Problems</th>
<th>Years</th>
<th>Indicator in Strategic Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2013</td>
<td>2014</td>
</tr>
<tr>
<td>1</td>
<td>Incidence of DHF in 100,000 population</td>
<td>171.4</td>
<td>88.8</td>
</tr>
<tr>
<td>2</td>
<td>Annual Parasite Incidence of malaria in 1,000 population</td>
<td>0</td>
<td>0.04</td>
</tr>
<tr>
<td>3</td>
<td>Prevalence of tuberculosis in 100,000 population</td>
<td>142</td>
<td>218</td>
</tr>
<tr>
<td>4</td>
<td>Prevalence of HIV/AIDS</td>
<td>0.005 (31)</td>
<td>0.008 (52)</td>
</tr>
<tr>
<td>5</td>
<td>Incidence of diarrhea in 1,000 population</td>
<td>37.6</td>
<td>30.4</td>
</tr>
<tr>
<td>6</td>
<td>Leprosy cases</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Measles cases</td>
<td>34</td>
<td>37</td>
</tr>
<tr>
<td>8</td>
<td>Diphtheria cases</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>Tetanus neonatorum cases</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

(Dinas Kesehatan Kota Cimahi, 2016)
The documents reviews of health reports in the district health office in the last 3 years show that there are 9 communicable diseases that are still found in Cimahi City. Overview of the communicable diseases can be seen in Table 2.

a. Incidence of DHF

Incidence of DHF was 135.5/100,000 population higher than the indicator of Health Ministry’s Strategic Plan (<49/100,000 population) and showed an increasing from year 2014.

In the last 3 years, cases of dengue fever were found in all areas in subdistrict and working area of Community Health Center of Cimahi City so that Cimahi City is categorized as dengue endemic area. The situation of last year showed that from 13 Community Health Centers in Cimahi City, only 1 Community Health Center with dengue incidence <49/100,000 population, it means 92.3% of area of Cimahi experienced incidence of DHF higher than indicator of Health Ministry’s Strategic Plan. Of the 792 cases found, 52% were male, 75% were between 5 - 44 years old and were at least under 1 year at 4%. Case fatality rate of DBD is 0.6% and lower than the indicator of Health Ministry’s Strategic Plan (<1%), but there are still some working areas of Community Health Center with CFR >1% with intervals between 1.2% to 5%.

b. Incidence of malaria

Malaria incidence showed a decline in the last 2 years, in 2014 found 22 cases (0.04/1,000 population) fell to 8 cases (0.01/1,000 population) in 2015, the figure is still below the indicator of Health Ministry’s Strategic Plan (Annual Parasite Incidence <1/1,000 population), in the year 2013 there were no cases of malaria. There were no deaths from all the malaria cases found in the last 2 years. All the cases found were from male population. Malaria cases that were found were of non-residents of Cimahi City, but they are soldiers who live in dormitories of military education centers in Cimahi area. At the time of being diagnosed with malaria, they just went home carrying out military duties from endemic areas like Papua in the last few days.

c. Prevalence of tuberculosis

The number of tuberculosis cases in Cimahi City in 2015 was 1,312 cases with the prevalence of 224/100,000 population, 467 cases of which were new cases. Of the 1,312 cases found, 783 cases (60%) were found in hospitals and 529 cases (40%) were found in the Community Health Center. About 49% of tuberculosis cases in 2015 were male and 10% were under 15 years of age. In 2014 the number of cases was 1,276 cases with the prevalence of 218/100,000 population, 441 cases of which were new cases, and in 2013 793 cases were found with prevalence of 142/100,000 population, 586 cases of which were new cases. Prevalence of tuberculosis in West Java 2015 was 127/100,000 population, while the indicator of Health Ministry’s Strategic Plan was 280/100,000 population. The increasing prevalence of tuberculosis in Cimahi was consistent with the decrease of success rate treatment from 91.17% in 2013 to 88.22% in 2015, even though the figure is still above the target of 85%. In 2015 there were 12 deaths during treatment.

d. Prevalence of HIV/AIDS

The cases of HIV/AIDS had increased from 31 cases in 2013 to 40 cases in 2015 and there were 6 deaths in 2014 and 3 deaths in 2015. In 2015 the HIV/AIDS prevalence was 0.007%, which is lower than the indicator of Health Ministry’s Strategic Plan, which is <0.5%. Of the 40 cases found, 75% of them were male, 57.5% were between 25-49 years old, and 5% of cases were under five years old.

e. Incidence of diarrhea
The incidence of diarrhea has decreased in the last 3 years. Across all working areas of Community Health Center, in 2013 the incidence of diarrhea was 37.6/1,000 population, in 2014 was 30.4/1,000 population and in 2015 was 30.3/1,000 population. In 2015, of the 17,795 cases found, 48% of them were male. The incidence rate of diarrhea was lower than the national morbidity survey for 2012 (214/1,000 population).

f. Leprosy cases
Cases of leprosy (multibacillary) were found in the last 2 years, 1 case in 2014 and 1 case in 2015. Indicator elimination of leprosy is <1/10,000 population.

g. Measles cases
Measles cases increased by 44.1% from 34 cases in 2013 to 49 cases in 2015. The indicator of the Health Ministry’s Strategic Plan is that the number of cases decrease by 7% from the baseline (2013). Of the 13 Community Health Centers in the Cimahi City, only two working areas of Community Health Center were free from measles cases in the last 3 years. The 2015 situation showed that only 4 working areas of the Community Health Center have not measles cases and 2 areas that have decreased the number of cases >7% from the baseline. While in other 7 working areas of Community Health Center the number of cases has increased, and in the other 2 work areas there was an outbreak.

h. Diphtheria cases
Diphtheria cases showed a decreased in the last 3 years (decreased by 66.7% from 2013), in 2013 there were 3 cases, 2014 there were 2 cases, and 2015 there was 1 case. The indicator of Health Ministry’s Strategic Plan is declining number of cases of Vaccine Preventable Diseases by 7% from the baseline (2013). No deaths from all cases were found in the last 3 years.

i. Tetanus neonatorum cases
There was 1 case of tetanus neonatorum in the year 2013, while in 2014 and 2015 there was no cases. No deaths from the tetanus neonatorum cases were found.

The identification of communicable diseases problems found that some diseases have increased in the last 3 years and the morbidity rate exceeds the indicator of the Health Ministry’s Strategic Plan 2015. Based on this evidence and discussion with officials and staff of communicable diseases control program, it was agreed that the communicable diseases problems were as follows:

1. Incidence of DHF was 135.5/100,000 population higher than the indicator of Health Ministry’s Strategic Plan (<49/100,000 population) and showed an increasing from year 2014
2. The prevalence of tuberculosis increased from 142/100,000 population in 2013 to 224/100,000 population by 2015.
3. The number of HIV/AIDS cases has increased from 31 cases in 2013 to 40 cases by 2015.
4. Cases of leprosy (multibacillary) were found in the last 2 years, 1 case in 2014 and 1 case in 2015.
5. The cases of measles increased by 44.1% from 34 cases in 2013 to 49 cases by 2015. The indicator of the Health Ministry’s Strategic Plan is the number of cases decreasing by 7% from the baseline (2013).

The incidence of malaria is not formulated in the statement of the problem because the API was under the indicator of Health Ministry’s Strategic Plan (<1/1,000 population) and showed a decrease from 22 cases in 2014 to 8 cases in 2015. Malaria cases was found in non-residents of Cimahi City, but they were soldiers who live in dormitories of military education centers in Cimahi area. At the time of being diagnosed with malaria, they just went home.
carrying out military duties from endemic areas like Papua in the last few days. The incidence of diarrhea was not formulated in the problem statement because the number of diarrhea cases showed a decreased in the last 3 years and the incidence rate was lower than the national morbidity survey for 2012 (214/1,000 population). The number of diphtheria cases was also not formulated in the problem statement because the number of cases shows a decreased in the last 3 years (decreased by 66.7% from 2013), while the indicator of Health Ministry’s Strategic Plan is declining number of cases of vaccine preventable diseases by 7% from the baseline (2013). The number of tetanus neonatorum cases not formulated in the problem statement because the cases of tetanus neonatorum has not found in the last 2 years.

The problem statements were assessed to determine priority problem based on the Basic Priority Rating System (BPRS) method. Based on the assessment, the following results can be seen in Table 3.

Table 3. Rating of the Problem Statements

<table>
<thead>
<tr>
<th>No</th>
<th>Problem statements</th>
<th>Score</th>
<th>Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Incidence of DHF higher than the indicator of Health Ministry’s Strategic Plan and showed an increasing from year 2014</td>
<td>208</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>The prevalence of tuberculosis was increased by 65% from year 2013.</td>
<td>184</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>The number of HIV/AIDS cases were increased by 29% from year 2013.</td>
<td>147</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>Cases of leprosy (multibacillary) were found in the last 2 years, 1 case in 2014 and 1 case in 2015.</td>
<td>128</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>The cases of measles increased by 44.1% from year 2013. The indicator was decreased by 7% from the baseline (year 2013).</td>
<td>160</td>
<td>3</td>
</tr>
</tbody>
</table>

The results of the assessment using the PEARL component show that all problem statements are feasible. Incidence of DHF was selected as the main priority due to several reasons, among others were the incidence of DHF increased by 52.6% from to 2014, the incidence of DHF was 176.5% higher than the indicator of Health Ministry’s Strategic Plan (<49/100.000 population), DHF cases was endemic in all areas in the last 3 years and there was more than 1% mortality in some working areas of Community Health Center that causing public concerns. The spread of DHF cases in 2015 can be seen in Figure 1.

Identification of the causes of priority problems (Incidence of DHF) has been done through brainstorming with officials and staff of communicable disease control programs from Cimahi City Health Office and from Community Health Center. This process has been done by identifying risk factors, direct contributing factors and indirect contributing factors. The result of the identification can be seen in Figure 2.
Figure 1. Incidence and CFR of DHF in Cimahi City 2015

Figure 2. Causes of the Problem Priority

The causes of the identified priority problems were discussed again with the officials and staff of communicable disease control programs to establish several factors that need to be addressed and are expected to reduce the incidence of DHF in the future. Factors that were formulated in the discussion were as follows:
1. Lack of health promotion. In 2015 no health promotion was done, especially about dengue prevention and control. This is proven by not found reports of health promotion. The low of healthy life behavior coverage also indicated a lack of health promotion. Health promotion is expected to influence the change behavior of the community to increase the active participation of the community in implementing mosquito breeding places control in their environment so that the vector population can be controlled.

2. Lack of supervision. Supervision on the implementation of mosquito breeding places control that conducted by the community and cadres was not implemented either by the health office or by the Community Health Center. Supervision needs to be done to ensure that mosquito breeding places control is implemented in accordance with the guidelines to provide optimal results.

3. Periodic larvae observation has not been implemented. In 2015, Community Health Center did not implement periodic larvae observation; this is proven by the absence of report of periodic larvae observation by Community Health Center officer. Periodic larvae observation should be performed by Community Health Center every 3 months. The results of periodic larvae observation can serve as an indicator of successful implementation of mosquito breeding places control that conducted by the community and cadres. These results can also be used as a comparison of larvae survey that conducted by cadres every month.

4. Poor reporting. This is proven by the absence of early warning reports of dengue that reported within 24 hours after diagnosis. Poor reporting may affect control measures conducted such as the delay in case confirmation may have an impact on the delay in conducting an epidemiological investigation. A proper epidemiological investigation needs to be done to immediately decide what control measures to take. Quick and proper control measures can prevent the spread of dengue disease more widely in a region.

4. CONCLUSION

Incidence of DHF was the most common communicable disease problem in Cimahi City in 2015. Lack of monitoring of mosquito breeding places control through periodic larvae observation was one of the causes. The periodic larvae observation has not been implemented due to lack of man power in Community Health Center. Staff of DHF control programs at Community Health Center generally serve as staff of other programs such as surveillance programs and other communicable disease control programs. Dengue surveillance has not been optimal, this is due to no vector density report and some cases of DHF are not conducted epidemiological investigation due to delays in reporting.

Based on this evidence, we recommended to the Community Health Center officers to conduct the periodic larvae observation every 3 months to measure the success of mosquito breeding places control, optimize vector surveillance and disease surveillance, and conduct health promotion to increase community participation in mosquito breeding places control programs. Especially for dengue surveillance, it is necessary to conduct an in-depth evaluation to find out which part of the surveillance system needs improvement.

5. REFERENCES


LINEAGE-SPECIFIC MYELOTOXICITY APPROACHES FOR PREDICTIVE HEMATOPOIETOLOGY TARGETING HEMATOPOIETIC STEM CELLS NICHE: BENZENE AS A MODEL

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ABSTRACT

Benzene exposure has been associated with hematotoxicity and leukemogenicity. However, the impact of benzene exposure on complex microenvironment of Hematopoietic Stem Cells (HSCs) niche, comprising of HSCs and lineage-specific progenitors remains elusive. Thus, a study on benzene-targeting HSCs niche could uncover mechanism linking benzene to HSCs niche alteration. This study evaluates the lineage-specific responses following exposure to a benzene metabolite, namely hydroquinone (HQ) in targeting HSCs and myeloid-committed progenitors. Freshly isolated murine bone marrow cells (BMCs) were exposed to HQ at series of concentrations (0 – 50 µM) for 24 hours followed by viability analysis using MTT assay. Chromosomal aberration (CA) was determined using karyotyping analysis. Expression of surface antigen for HSCs (Sca-1) was confirmed by flow cytometer. Lineage-specific myelotoxicity was studied using the colony-forming unit (CFU) assay for the following myeloid progenitors: CFU granulocyte /erythrocyte /macrophage /megakaryocyte (CFU-GEMM), CFU-granulocyte/macrophage (CFU-GM), CFU-granulocyte (CFU-G), CFU-macrophage (CFU-M), CFU-erythroid (CFU-E) and Burst-forming unit erythroid (BFU-E). HQ reduced (p<0.05) viability of BMCs at 25 µM and 50 µM with the IC10, IC25, and IC50 were at 17 µM, 23 µM and 35 µM, respectively. Increased (p<0.05) frequency of CA was observed in HQ-treated group as compared to control. Reduced (p<0.05) Sca-1+ cells at 17 µM, 23 µM and 35 µM indicates cytotoxic effect of HQ on HSCs population. Reduced (p<0.05) total colony counts were noted following HQ exposure at 6.25 µM and a complete inhibition of colony growth were observed at higher concentration (12.5 µM). HQ reduced (p<0.05) the growth of CFU-GEMM, CFU-GM and CFU-G at 6.25 µM, while the growth of CFU-M, CFU-E and BFU-E were not remarkably affected at lower concentrations (1.56 µM and 6.25 µM). Conclusively, HQ induces chromosomal aberration and cytotoxicity on HSCs with notable lineage-specific responses in governing benzene-mediated myelotoxicity targeting HSCs niche.

Keywords: Benzene; Hematopoietic Stem Cells; Hematotoxicity; Lineage-specific; Myelotoxicity

INTRODUCTION

Benzene is an important industrial material that is extensively used as a solvent and (Khan, 2007) a known hematotoxicant (Zhang et al, 2012; IARC, 1987). Chronic occupational exposure to benzene has been linked to a number of hematological disorders and
malignancies (Snyder et al., 1993). Despite the reported findings, the precise mechanism mediating the events have yet to be explored. Thus, it has been a major focus to study the mechanisms underlying benzene-induced hematotoxicity and leukemogenicity (Snyder, 2007; Atkinson, 2009; Bird et al, 2010; Wang et al, 2012). Hematopoietic stem cells (HSCs) have been suggested by many studies as a highly potent target cells for benzene-induced alterations (Faiola et al., 2004). Potential toxic and leukomogenic drug exposure on HSCs may induces cytotoxicity and DNA damage which then could contribute towards genomics alterations of these progenitor cells, leading to hematopoietic disorders and malignancies.

In bone marrow (BM) compartment, benzene metabolite, hydroquinone (HQ) will be metabolized to 1,4-benzoquinone (1,4 BQ), which mediated by myeloperoxidase enzyme (MPO), making myeloid-committed progenitors as prime target among others lineage-committed progenitors in Hematopoietic Stem Cells (HSCs) niche (Yoon et al. 2003). Thus, biotransformation of benzene to toxic metabolites plays the crucial role in mediating myelotoxicity, hematotoxicity and leukemogenicity affecting hematopoietic stem cells / progenitors niche (Faiola et al. 2004; Wang et al. 2012). However, understanding the mechanism linking benzene to the HSCs niche is challenging as the niche is a complex microenvironment composed of HSCs and committed progenitors for lymphoid, erythroid and myeloid lineages. Thus, novel approaches and mechanisms to address benzene toxicity at HSC niche targeting hematopoietic stem cells and progenitors of different lineages is fundamental.

Up to our knowledge, none of the study so far directly demonstrates the impact of benzene exposure on HSCs niche, particularly in the context of myelotoxicity targeting myeloid-committed progenitors composed of progenitor with different lineage commitment potency. Thus, the prime focus of this study is to elucidate potential role of lineages-specific response in mediating benzene-induce myelotoxicity targeting myeloid progenitors. With that, comparative investigation on the effect of a benzene metabolite exposure, namely hydroquinone (HQ) targeting myeloid-committed progenitors with different lineage commitment potency was employed. This study utilized clonogenic assay for determination of multi-lineages-committed progenitors; regarded as colony forming unit (CFU) granulocyte /erythrocyte /macrophage /megakaryocyte (CFU-GEMM) and CFU-granulocyte/macrophage (CFU-GM) as well as single lineage-committed progenitors identified as CFU-granulocyte (CFU-G), CFU-macrophage (CFU-M), CFU-erythroid (CFU-E) and Burst-forming unit erythroid (BFU-E). Meanwhile, cytotoxicity and chromosomal abnormality assessments were carried out to study hematotoxicity and genotoxicity following HQ exposure. Overall, the use of lineages-directed strategy can provide a fundamental platform in the study of benzene or other chemical toxicity affecting HSC niche.

2. METHODS
2.1. Hydroquinone exposure
Mouse bone marrow cells (MBMCs) were freshly isolated using flushing technique following protocol as described (Chow, et al 2015). Cells were cultured in Hematopoietic Stem Cells growth media supplemented with Stem Cell Factor (100 ng/ml), Interleukin-6 (10 ng/ml) and
Interleukin-3 (5 ng/ml) throughout experiment. Following MBCs harvest, cells were allowed to grow for 24 hours prior to HQ exposure. After 24 hours, cells were treated with HQ at series of serial diluted concentrations (1.5625, 3.125, 6.25, 12.5, 25 and 50 µM) for 24 hours. Then, viability cells were determined using MTT assay following protocol as in Chow et al (2015) and the IC_{10}, IC_{25} and IC_{50} were obtained for downstream analysis.

2.2. Immunophenotyping of Sca-1+ cells

The effect of HQ exposure on HSCs population (Sca-1+) was confirmed using immunophenotyping analysis as determined by flow cytometer. Protocol for immunophenotyping was performed according to Chow et al 2015. Briefly, following 24 hours of HQ treatment, cells were harvested by centrifugation, suspended in 50 µl of staining buffer and loaded with anti-mouse Sca-1+ antibody for 30 minutes’ incubation at 4°C in dark condition. Mixtures were then washed with PBS, the supernatant was removed and the cells were re-suspended into 400 µl PBS. Then expression of Sca-1 was identified using flow cytometer with with isotope-matched antibody was used as negative control.

2.3. Colony forming cell (CFC) assay

Myeloid clonogenic CFC assay was used to determine the effect of HQ exposure targeting various type of myeloid progenitors. CFC assay was done according to the protocol by Chow et al 2015. The agar used to culture the colonies was Mouse Methylcellulose Complete Media (R&D System; HSC007), which supports the growth of all myeloid progenitors as follows: CFU-E, BFU-E, CFU-G, CFU-M, CFU-GM and CFU-GEMM. Briefly, after 24 h of HQ exposure, the cell viability in each experimental group was determined using trypan blue dye exclusion. Viable cells (1 x10⁴ cells) were seeded into a 35-mm plate containing 1 mL of methylcellulose culture media (R&D Systems) and incubated at 37°C with 5% CO2. During the culture period, the progenitor cells formed individual colonies that could be classified microscopically according to the progenitor cell type. Meanwhile, the majority of terminally differentiated cells died out. Therefore, the presence of colonies indicated the presence of viable progenitor cells. The colonies were classified and enumerated based on the morphological recognition under inverted microscope on day 14 of culture. Image representing each CFUs are as shown (Image 1).

Image 1 Various types of colony-forming units (CFUs) for mouse A: CFU-E; B: BFU-E; C: CFU-G; D: CFU-M; E: CFU-GM; F: CFU-GEMM (Magnification: 40x)
2.4. Cytogenetic assay

Following exposure to HQ for 24 hours, 50μl colcemid (10μg / ml) was added to each culture 3 hours prior to harvesting in order to obtain a sufficient number of metaphase. Hypotonic treatment (KCl 0.075M) was added to the cell pellet and incubated for 20 min at 37°C, which followed by fixation with 2ml fixative (methanol/glacial acetic acid, 3:1). Chromosomes observation was carried out following Lieshman staining and the karyotyping was done using Applied Spectral Imaging System.

2.5. Statistical Analysis

Each experiment was repeated thrice, and the data are presented as the means ± standard error mean (SEM). Statistical analysis was conducted using SPSS version 16.0 (IBM Corporation, Armonk, New York, USA) and the level of significance used for all statistical tests was p < 0.05. One-way of variance (ANOVA) was conducted for comparison between two or more mean values between experimental groups.

RESULTS AND DISCUSSION

3.1. Cytotoxicity of HQ on Bone Marrow Cells and Hematopoietic Stem Cells (Sca-1+)

As shown in Figure 1 (a), significant reduction (p < 0.05) of cell viability was recorded for MBMCs treated with HQ at 25 and 50 µM as compared to control. The obtained IC₁₀, IC₂₅ and IC₅₀ for HQ were at 17, 23 and 35 µM; respectively. Meanwhile, exposure to HQ for 24 hours at 17, 23 and 35 µM causes significant reduction (p < 0.05) in the percentage of Sca-1+ cells compared to non-treated control group.

Benzene had been proven as a genotoxic, mutagenic and hematotoxic chemical compound (Khan 2007). Despite of understanding that benzene metabolism in bone marrow plays a crucial role in mediating benzene toxicity, the precise mechanism associating benzene to hematotoxic effects such as leukemia, aplastic anemia and pancytopenia remains elusive (Snyder & Hedli 1996). Thus, study focusing in investigating the interaction between benzene metabolites and the targeted hematopoietic system can aid to elucidate this underlying mechanism. Based on the viability analysis, HQ induced cytotoxicity on the bone marrow cells and HSCs population (Sca-1+) which the effects are prominent following exposure to HQ at higher concentrations. Previously, exposure of mice to benzene through inhalation triggered cytotoxicity as demonstrated by reduction in the bone marrow cells and spleen cells cellularity (Green et al. 1981). Meanwhile, there was a notable increased in MBMCs viability at low concentration of HQ (6.25 µM) exposure. Although the increment

![Figure 1 Cytotoxicity of HQ targeting Bone Marrow Cells and Hematopoietic Stem Cells (Sca-1+)](image-url)
was not significant as compared to control, it may indicate differential response of cells. As reported by Hazel et al. (1996) exposure to low dose of HQ can inhibit apoptosis in the myeloblast and induce their proliferation, which can be associated to current finding.

Effect of HQ Exposure on Clonogenicity of Myeloid-Committed Progenitors

As shown in the Figure 2, exposure to HQ for 24 hours at respective concentrations inhibit clonogenicity of myeloid progenitors as evidenced by absent of CFUs formation at 12.5 µM (IC$_{50}$), and significant ($p < 0.05$) reduction in CFUs counts at 6.25 µM exposure as compared to control.

![Figure 2 Effect of HQ on clonogenicity of myeloid-commited progenitors](image)

3.2.1. Effect of HQ exposure on multi-lineages myeloid-committed progenitors.

The effects of HQ exposure for 24 hours on the CFU-GEMM (a) and CFU-GM (b) are as shown (Figure 3). Overall, exposure to 12.5µM HQ causes complete inhibition of CFUs growth for both progenitors. Clonogenicity of CFU-GEMM was reduced following HQ exposure with significant reduction ($p<0.05$) of CFUs was noted at 1.56 µM and 6.25µM. Meanwhile, the clonogenicity of CFU-GM was significantly ($p<0.05$) reduced only at 6.25µM HQ as compared to control group.

![Figure 3 Effect of HQ on clonogenicity of multi-lineages myeloid-committed progenitors](image)

Effect of HQ on single-lineages myeloid-committed progenitors.
The responses of single-lineages myeloid-committed progenitors toward HQ exposure for 24 hours are as shown in Figure 4. Overall, exposure to HQ at 12.5 µM inhibits CFU growth of every progenitor. The clonogenicity of CFU-G (a) and CFU-M(b) were reduced in a dose-dependent manner, with a significant (p<0.05) reduction was only notable for CFU-G at 6.25 µM as compared to control group. Meanwhile, the BFU-E (c) showed differential response with a notable slight increase in CFUs count at 1.56 µM HQ exposure, which was further reduced following an exposure to higher concentration (6.25 µM). As for CFU-E, no remarkable changes in CFUs growth was identified for HQ-treated group at 1.56 µM and 6.25 µM HQ than the control.

Figure 4 Effect of HQ on clonogenicity of single-lineage myeloid-commited progenitors

HSCs and hematopoietic progenitors possess the ability to proliferate and differentiate to mature cells. This unique ability enables them to form colonies in a semi-solid medium. Thus, the colony-forming unit (CFU) assay has been widely used for the toxicological assessment targeting HSCs and progenitors (Parent-Massin, 2001; Malerba et al., 2004). A previous in vivo study reported that benzene reduces the number of multi-potential hematopoietic stem cells (CFU-S) and of colony-forming units-granulocytes and macrophages (CFU-GM) in C57BL/6 mice (Green et al., 1981). Thus, they showed that depletion of stem cells is involved in the pathogenesis of benzene-induced hematotoxicity. Furthermore, Corti and Snyder (1998) reported that some of the benzene metabolites, such as HQ, phenol, and 1,4-BQ, exhibited dose-dependent inhibition in colony growth of mouse colony- forming units-erythroid (CFU-E). The effects of benzene on the clonogenicity of HSCs and HPCs can generate information on their capacities for proliferation and multipotency, which are crucial for the maintenance of hematopoiesis. Current finding demonstrated that myeloid progenitors are responsive to HQ exposure in lineage-specific manner. CFU-GEMM which represent the most highly primitive myeloid progenitors with their multi-lineages commitment potency showed greater susceptibility to HQ toxicity as evidenced from significant reduction in CFU-GEMM counts following exposure to HQ at as
low as 6.25 µM. In contrast, the clonogenicity of other myeloid progenitors (CFU-G, CFU-M, CFU-E and BFU-E) were significantly impaired only at higher concentration of HQ exposure (12.5 µM). This study emphasizes the lineage-specific responses of various myeloid-committed progenitors which the finding could uncover potential mechanism linking benzene to myelotoxicity targeting HSCs niche.

Effect of HQ Exposure on the Chromosomal Abnormality of Murine Bone Marrow-Derived HSCs

Generally, chromosomal abnormality can be detected for 24 hours exposure to each of HQ concentration. A total of 31.7 ± 6.0%, 23.3 ± 4.4% and 38.3 ± 8.8% of chromosomal abnormalities were detected at 1.56µM, 3.12µM and 6.25µM HQ; respectively as compared to positive control group treated with etoposide (41.7 ± 10.1%). Figure 5 indicated that the percentage of chromosomal abnormality was significantly (p <0.05) higher following HQ exposure as compared to non-treated control group which presented with non-detectable chromosomal abnormality.

![Graph showing chromosomal abnormality percentage](Image)

* p < 0.05 as compared to non-treated control group

Figure 5 Effect of HQ exposure on the chromosomal stability of murine bone marrow-derived HSCs

In this study, the effects of HQ on chromosomal integrity of exposed bone marrow cells was determined through karyotyping. Our study found that exposure to HQ at all tested concentrations able to induce significant cytogenetic abnormalities in the exposed cells. Our result is in line to Ji et al. (2010) who has shown that HQ-treated human lymphoblastic cells (TK6) acquired structural and numerical abnormalities of the chromosome, indicating HQ can be genotoxic. Meanwhile, previous study have shown that lymphocyte of benzene-exposed have micronucleus and HQ has been shown as major contributor to the clastogenic and aneugenic effects for humans as compared to other benzene metabolites such as catechol, phenol and 1-4 benzokuinon(1,4 BQ). While there are reports concerning HQ genotoxicity, but very few linking this effect at the HSCs and progenitor’s population. Thus future study focusing on genotoxic effect of benzene metabolite targeting progenitors of various lineages can provide fundamental approach to study benzene-mediated hematotoxicity and leukemogenicity.

4. CONCLUSION
Conclusively, HQ able to induce chromosomal aberration and cytotoxicity on myeloid-committed progenitors with notable lineage-specific responses in governing benzene-mediated myelotoxicity targeting HSCs niche.

5. ACKNOWLEDGEMENT

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6. REFERENCES


SCIENCE & TECHNOLOGY
APPLICATION OF HAZAKA PLANT COMPOST TECHNOLOGY FOR HYDROGEN SULFIDE REMOVAL AND FOR PLANT PROTECTION AGAINST BACTERIAL INFECTION

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ABSTRACT

Compost is well known for agricultural purpose for providing plant nutrition and make agricultural soil healthier. But, there are several potential applications of compost that still need to be explored. We found that compost from Hazaka Plant can be implemented at bioremediation and plant protection field. Compost can become a bioremediation agent as a biofilter that remove hydrogen sulfide, a harmful gas that can be found from several industries, such as petroleum, pulp and paper, biogas, and food processing industries. Compost also can be implemented for protecting plants against bacterial infection, especially protecting rice from a seed blight that is caused by Burkholderia glumae infection. Every application of the compost is not apart from unique microbial consortium there. Microbial consortium from Hazaka Plant composts are extensively studied because Hazaka Plant has unique composting methods from several wastes that might be contributed to uniqueness of microbial consortium in the comports. The research about applications of Hazaka Plant comports and microorganisms in it is still continue.

Keywords: Burkholderia glumae infection; Compost; Hydrogen sulfide; Microbial consortium; Plant protection

1. INTRODUCTION

Compost is the product resulting from the controlled biological decomposition of organic material that has been sanitized through the generation of heat and stabilized to the point that it is beneficial to plant growth (Cambardella et.al., 2003). Compost had been used for centuries to maintain soil fertility and plant health (Hoitink, 2004). Benefit of compost for agricultural soil is well known because of its positive effect to improved soil structure, provide good moisture management to soil, modifies and stabilize soil pH, Increase cation exchange capacity of soil, and provide macro and micronutrient for plant, and also provide soil microorganism that beneficial for plants (US Composting Council, 2001).

Beside compost abilities to improve quality of soil and also promoting plant growth, compost have another application on agricultural practices. Compost is now known can be used for protecting plant again several diseases that caused by nematodes, bacteria, or soil-borne fungi in various cropping system (Hoitink & Fahy, 1986). For example, compost was known to have suppressive capacity against wilt that caused by bacteria from species Ralstonia solanacearum in tomatoes (Liu et.al., 2016) and also have a suppressive effect against wilt that caused by fungus from species Fusarium oxysporum in melon (Pascual et.al., 2004).
Hydrogen sulphide (H₂S) is a harmful air pollutant gas that easily occurs in many industries such as landfill sites, wastewater treatment, biogas plant, etc. At the landfill site, high concentration of H₂S gas can be up to 1000 ppm, lethal enough for humans and it cost a lot of expense for its removal. Currently, H₂S from these industries is generally removed by chemical agents. But it must be frequent exchanged. It raises costs, produce waste by-product, and not good for environmental preservation. The disadvantage of chemical agents for H₂S removal cause biofiltration of H₂S become attention recently, it is because biofiltration have a potential to be more cheaper, sustainable, and has a lower environmental burden.

Hazaka compost is a compost that produced by Hazaka composting system which developed in Japan as an alternative way to treat the large scale of organic waste in rapid speed. The system was designed to run the composting process of as much as 20 m³ daily wastes per line. The dimensions of each line is 3 m depth, 2 m width, and 100 m length. Composting process will take time only in 25 days (Hazaka Plant, 2012). The process will not produce bad odor and harmful byproducts. It is not necessary to separate between anorganic (i.e. plastics) and organic wastes in the system because it will easily separated after the waste become mature compost by a simple filtering. The compost does not require any post treatment (Hazaka Plant, 2012).

Our studies are aimed to find the use of Hazaka compost as a plant protection agent, especially against seed blight in rice. Seed blight in rice itself is caused by bacteria from species *Burkholderia glumae* that common to happen in Japan (Devescovi et.al., 2007). We also aimed to find possibility of Hazaka compost application as biofilter on hydrogen sulphide removal. We regard Hazaka compost as biofilter agent because Hazaka compost have a physicochemical properties that can support the growing of sulphur oxidizing bacteria that can remove hydrogen sulphide from the environment.

2. METHODS

2.1. Hazaka Compost for Protecting Rice Against *Burkholderia glumae* Infection

2.1.1. Rice Preparation

Rice that used in this experiment is *Oryza sativa var. japonica*. Rice was prepared by soaking it on distilled water for 24 hours, after 24 hours, the water are changed and the rice soaked for another 48 hours. Rice then separated evenly for infection test and non-infection test. *Burkholderia glumae* are incubated for 3 days and taken for immersed with rice. Rice that already 48 hours soaked and going to be used on infection test are immersed with *Burkholderia glumae* then evaporated on vacum condition for 5 minutes.

2.1.2 Soil Preparation and Rice Plantation

Soil was prepared at 300 cc plastic box. Soil type is the soil that use for agricultural purpose. 100 gram of soil was put into the plastic box as bottom layer soil. Rice was planted at bottom layer soil and then covered by 50 gram of top layer soil. Every planted rice then watered everyday at morning until the water are get into the top layer of soil. For rice that used in non-infection test, soil was not mixed with Hazaka compost. Soil was mixed with 10% Hazaka compost if it is used for rice that already infected by *Burkholderia glumae*. Rice was growth for 14 days.
2.2. Hazaka Compost for Hydrogen Sulphide Removal

The location of the test are in Sendai landfill sites. Research was conducted for 1 years. Tank was connected to the landfill site using pipes with valves. Hazaka compost was mixed with glass wol and then putted inside the tank. After the tank was closed, valves in the pipes are open so the hydrogen sulphide gas form the ground can be flow inside the tank. The hydrogen sulphide from ground below are being measured before go into the tank. Hydrogen sulphide that flow from the pipes on the bottom of tank then through the mixed Hazaka compost and glass wol, finally the hydrogen sulphide gas are out from the tank through the pipes at the top of the tank. The Hydrogen sulphide gas that flow from outlet pipes then measured using hydrogen sulphides gas concentration detector.

![Figure 1 Experiment tank setup on landfill sites](image)

Table 1 Number of receptors in each container

<table>
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<th>Experiment</th>
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<th>Receptor</th>
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</tr>
<tr>
<td>2</td>
<td>100</td>
<td>14</td>
</tr>
<tr>
<td>3</td>
<td>150</td>
<td>9</td>
</tr>
<tr>
<td>4</td>
<td>200</td>
<td>7</td>
</tr>
<tr>
<td>5</td>
<td>250</td>
<td>5</td>
</tr>
</tbody>
</table>

3. RESULTS AND DISCUSSION

3.1. Hazaka Compost effect on Rice That Being Infected by *Burkholderia glumae*

Rice seed that planted without infection are growth healthy and didn't show any symptoms of infection, either growth at soil or soil that already mixed with 10% Hazaka compost. On the other hand, rice seed that planted on normal soil and infected by *Burkholderia glumae* are severely got seed blight symptoms, didn't grow properly, and didn't grow any leave. But, infected rice seed that planted at soil that already mixed with 10% compost are grow normally just like rice seed that didn't infected, even though its leaves are sorter than non-infected rice seed.
3.2. Hazaka Compost Effect on Removing Hydrogen Sulphide

Hydrogen sulphide concentration that flow into the inlet was detected up to 100 ppm because it is the limit of detector. But at the outlet, hydrogen sulphide was detected from 12 ppm to 0 ppm. That result show how significant Hazaka compost at removing the concentration of hydrogen sulphide from the landfill.

![Figure 2 Comparison of hydrogen sulphide gas concentration between outlet and inlet](image)

4. CONCLUSION

Hazaka compost show positive result on protecting rice seed against bacterial infection of *Burkholderia glumae* that can causing seed blight. Hazaka compost also has a positive effect on removing hydrogen sulphide gas from landfill. This studies show that Hazaka compost still had many potential and possibilities of application in industries.

5. ACKNOWLEDGEMENT

Provide acknowledgements accordingly. List here those individuals or institutions who provided help during the research (e.g., providing grants, laboratory facility, language help, writing assistance or proof reading the article, etc.). In case of the grants, please provide the number and year of the grant received.

6. REFERENCES


APPLICATION OF MPC CONTROLLER STRATEGIES TO FEEDER AND BLENDER UNIT AND COMPARISON WITH CONVENTIONAL PI.

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Abstract

Application of the Model Predictive Controls (MPC) in continuous pharmaceutical manufacturing for the feeder and blender unit (FBU) is demonstrated in this paper. The objectives are to design the Model-based Predictive Controls for the FBU model in order to obtain the output mass flow rate, $m_o$, closer to the output reference mass flowrate, $m_{o,ref}$, by manipulating the blender speed, $w$. Later, MPC controller performance is compared with the conventional PID controller. The research is carried out in MATLAB/Simulink starting from the process of modelling up to control system development and controller performance evaluation.

Data analysis has been carried out studying the MPC for the blending unit. The major concern with the process is that it has direct feedthrough terms that generates non-trivial difficulties in term of applying the control system to the process in the MATLAB. On the other hand, the evaluation on the performance is made after penalizing the direct feedthrough terms and significantly show advantages of the MPC compared to conventional PID controller. By implementing MPC to the system, it has faster response in archiving steady state response and reduce large overshoots when dealing with both set point tracking and set point changes. Plus, MPC also able to perform better performance after the introduction of disturbance in its input signal.

Keywords: Model predictive control; Feeder blender unit; PID controller; Blender speed; Output mass flowrate.

1.0 Introduction

Generally, most of the medicine or drugs that being produced from the pharmaceutical companies are being manufactured in batch process. Currently, the batch processing and manufacturing are still strongly dominate in the pharmaceutical industries. The problems arise from batch processing is that it has a higher equipment cost, higher operational cost, bigger equipment footprint, insufficient controller operability in the process, and product quality is hard to be maintained (Singh et al., 2012a). Because of this, studies and researches have been done to provide a better continuous processing and manufacturing. (Lee et al. 2015).

In the studies on the continuous pharmaceutical production, generally there are few unit operations involved such as feeders, blenders, drying, wet or dry granulation of the drugs material, coating, product tableting and etc. In order to optimize the production continuously while enhance the drugs processing, a lot of studies and researches have been developed and discussed. For examples works on modelling, monitoring process, implementing online/inline system to the process and as well as applying control system in the process (Jaumota et al. 2013), (Karande, Sia Heng and Liew 2010) (Zacour, Igne, Drennen, and Anderson 2011) (Igne et al. 2011, Igne et al. 2014) (Singh, Ierapetritiou and Ramachandran 2012, Singh et al. 2013, Singh et al. 2014, Singh et al. 2015).

In the pharmaceutical manufacturing process, blending is considered as the most important unit operation to ensure and maintain the homogeneity of the powder blend before proceed to powder/ granules compression and tableting process. There are a few problems that arise from the blending process such as poorer tablet quality attributes which been discussed in (Jaumot. et al 2013)
which later can harm the end users or consumers.

Blending or mixing operations of particulate solids in the pharmaceutical industry are carried out batch-wise even when the previous or further process steps are continuous. Hence, the handling and storage of the blended product can lead to segregation problems. An alternative to batch mixing is continuous blending. Continuous blending aims to continuously feed and blend the ingredients; thus, the resulting blend is ready for the next unit operation. Continuous blending when connected to the following unit operation offers several advantages such as continuity of production, reduction of the intermediate handling resulting in lower segregation, less storage space, high production capacity, easier scale-up, and faster product availability (Manjunath, Dhodapkar and Jacob 2004) and (Weinekötter, Gericke (2006).

In this study, we will be using the combination of two feeders and a blender is referred to as feeder blending unit (FBU). (Jakob et al. 2016). In order to maintain the critical quality attributes (CQA), in the continuous production, of the final product, feeder and blender unit is required. Especially when comes to the blender performance because it will affect the product content uniformity (Haack, 2014).

In this study, we will also implement a model-predictive control (MPC) as one of the strategies in applying controller to the FBU. The evaluation on the controller performances will be discussed and additionally provide a significant advantage compared to a conventional PI controller structure.

The application of a control system is still in the early stage in the pharmaceutical industry, and is an open research problem for the technology providers as well as the academics (Muzzio et al., 2013). When readings through some studies that have been done, it is said that for such pharmaceutical process and manufacturing, it is quite complex to implement the control system. Example of the complexity taken from the study are the most suitable control strategies, such as PID controller, feed-forward/feed-backward controller, MPC, neural-networks and etc, is yet to remain unknown. (Singh et al., 2014). Plus, it is mentioned that there is no standards when its coming to the implementation of the control hardware and software.

In Jakob et al. 2016, they have tried to implement several control strategy on the FBU process. Examples that can be read on are the conventional PI-controller and etc. However, in their study, they concluded that the mass hold-up of the blender cannot be taken into consideration for such controller as a constraints. Therefore, they proposed that, a study on implementing the MPC (Jakob et al. 2016) to the FBU process as well as evaluating the performance (Igne et al. 2014) (Singh et al. 2013) (Singh et al. 2014) has to be done and developed. In this paper, the study on the performance of MPC with a direct feedthrough will be introduced, since the proposed dynamic model has input signal in the output function. Thus, a better modelling as well as simulation and performance evaluation are being studied to increase the efficiency and performance of the MPC on FBU process.

1.1 Objectives
i) To design a Model-based Predictive Controls for the feed blending unit (FBU) process system with multiple set points.
ii) To compare the control performance of MPC over PID controller.

1.2 Scope and significance of the Study
The research has to be carried out in MATLAB simulation starting from process modelling of a chemical process, control system development and controller performance evaluation. In this research, the process models are derived from the first principle continuity equation. This study is to model the FBU process as well as developing a control system which is MPC to the process. Later, the performance of the controlling method will be analysed and evaluated based on the results obtained from the simulation in MATLAB/Simulink. Then the conventional control method, PID, also will be developed and implemented to the same FBU process in order to compare the performance with the MPC.

2.0 Case study
2.1 Mathematical Model
Fig. 1. Sketch of the Feeder Blending Unit (FBU).

Figure 1 shows an illustrative of a typical pharmaceutical manufacturing blender. It has two feeders which are used to supply two different materials with mass flowrate \( \dot{m}_{1,i} \) and \( \dot{m}_{2,i} \) to the blender. The concentrations at the inlet can be represented by \( c_{1,i} \), \( c_{2,i} \), while the concentration at the outlet of the blender are denoted by \( c_{1,o} \), \( c_{2,o} \). The output mass flowrate of the blender is described as \( \dot{m}_o \). All the inputs, state variables and outputs of the pharmaceutical blender model are written in the vectors forms \( u \), \( y \), and \( x \), respectively.

The continuous operating blender model is developed, first, by referring to the physical laws of the mass hold-up, \( mh_u \), of the blender. Second, the residence time distribution \( E(t) \) of the particles passing the blender is also referred based on the Fokker–Planck equation (Denisov et al., 2009) (FPE).

2.1 Representation of the blender model in state-space form

The state-space form of the blender model can be shown as below:

\[
\begin{align*}
\dot{u} &= \left[ \begin{array}{c} \omega \\ \dot{m}_{1,i} \\ \dot{m}_{2,i} \end{array} \right], \\
y &= \left[ \begin{array}{c} \dot{m}_o \\ c_{1,o} \\ c_{2,o} \end{array} \right], \\
\dot{x} &= \left( \begin{array}{ccc} A_1 & 0 & B_1 \\ 0 & A_2 & B_2 \end{array} \right)x + \left( \begin{array}{c} 0 \\ 0 \end{array} \right)u, \\
y &= f(x, u) = \begin{pmatrix} x_N \\ x_{N+1} \\ x_{N+2} \\ \vdots \\ x_{N+(M-1)} \\ x_{N+M} \\ \vdots \\ x_{N+3(M-1)} \\ 1 - \sum_{k=1}^{M-1} x_{N+3,k} (t - T_d(u_1)) \end{pmatrix} \\
&= \begin{pmatrix} \frac{N}{\tau(u_1)} x_N \\ x_{N+1}(t - T_d(u_1)) \\ x_{N+2}(t - T_d(u_1)) \\ \vdots \\ x_{N+(M-1)}(t - T_d(u_1)) \\ x_{N+M}(t - T_d(u_1)) \end{pmatrix}
\end{align*}
\]

Where, the system matrix \( A \) and input matrix \( B \) are non-constant but depends on the manipulated variable, \( u \).

The blender output can also be shown in terms of the delayed state variables as stated in equation (4).

i) In order to describe the behaviour of the first order system for the process, the states \( x_{N+3} \) up to \( x_{N+3(M-1)} \) have been introduced.

2.2 Linearization of the blender model

The overall blender is described as Eq. (1), (2), (3) and (4). Note that, the equations in Eq. (3) and (4) represent the non-linear system of the blender model. Therefore, in order to design MPC for a linear system, the current state space form should be linearized. The overall linearized state space system can be acquired from equation below:

\[
\begin{align*}
\dot{dx} &= \left( \begin{array}{cc} A_{11} & 0 \\ 0 & A_{21} \end{array} \right)\Delta x + \left( \begin{array}{c} 0 \\ B_{21} \end{array} \right)\Delta u, \\
\Delta y &= \left( \begin{array}{cc} C_{11} & 0 \\ C_{21} \end{array} \right)\Delta x + \left( \begin{array}{c} 0 \\ D_{21} \end{array} \right)\Delta u
\end{align*}
\]

3.0 Controller System Development

The purpose of the implementation of the control strategy is to obtain the output mass flowrate, \( \dot{m}_o \), of the blender close to the output reference mass flowrate, \( \dot{m}_{o,\text{ref}} \). To achieve the control concept, the speed of the blender, \( \omega \), is treated as the manipulated variable.

3.1 Developing the PI-Controller

The whole PI controller and blender is created in MATLAB/Simulink by constructing the block diagram. The blender transfer function is obtained from the state-space in the Eq. (6) and (7). For the blender block, the transfer function is represented as

\[
\begin{align*}
F_1(s) &= \frac{7.87\times10^{-5}}{s^6 + 1.038 s^5 + 0.3821 s^4 + 0.05358 s^3 + 0.003351 s^2 + 7.874\times10^{-5}} \\
F_2(s) &= \frac{7.87\times10^{-5}}{s^6 + 1.038 s^5 + 0.3821 s^4 + 0.05358 s^3 + 0.003351 s^2 + 7.874\times10^{-5}} \\
S(s) &= \frac{6.259\times10^{-5} + 2358e-09 + 5.332e-01 + 0.11 + 7.7824e-04}{0.1 s^6 + 1.038 s^5 + 0.3821 s^4 + 0.05358 s^3 + 0.003351 s^2 + 7.874\times10^{-5}}
\end{align*}
\]
All the transfer function is connected in the blender subsystem to become output signal. For the controller, the parameter of the PI controller (Table 1) is obtained by simulation test and via Cohen-Coon controller setting. (Steven E. et al., 2008).

<table>
<thead>
<tr>
<th>Table 1: PI controller parameter</th>
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<tr>
<td>$K_p$</td>
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<td>2.13</td>
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Three simulations are performed.

1) The reference outlet mass flow for the process is set to 30kg/hr at $t=0$s. Figure B.1 shows the result obtained from the simulation. The response curve has a delay of $T_D = 1.271$s, rise time $t = 11.727$s and overshoot= 62.21% before it reached steady state at $t=165.769$s. The PI controller response manage to reach to the desired output reference mass flowrate.

2) For second simulation, the set point is change to 60kg/hr at $t=200$s. Figure B.1 shows the result obtain from the simulation. The purpose of increment is to test either the PI controller manage to track the set point changes in the process or not. From the curve response, it shows that for such blender model, the outlet mass flow can be obtained in a steady state by manipulating the speed of the blender. The only problem with the current PI controller is that, it has large value of overshoot that occur in the process plant. Thus, this drawback will be overcome by implementing MPC to the blender model in the next subsection.

3) For the third simulation, with the set point of 30kg/hr, the system is introduced with a disturbanceto study on how the feed rate fluctuation of the system can affecting the output mass flowrate, $\dot{m}_\phi$. The result is shown in Figure B.2. The system is able to treat the disturbance well and manage to reach the set point.

### 3.2 Model Predictive Controller

Again, the purpose of model predictive controller is to obtain the output mass flowrate, $\dot{m}_\phi$ of the blender model near to the desired output reference mass flowrate, $\dot{m}_{\phi, ref}$. Initially, the presented blender model contains a direct feedthrough term in its system. Direct feedthrough means that the output function is controlled directly by the value of an input signal. From Eq. (4), the output function clearly having input, $u_t$. Typically, by having a direct feedthrough from the manipulated variable the model predictive controller cannot be executed in the MATLAB/Simulink.

A modification has been made in order to penalize the direct feedthrough term by adding as small-time delay for the system. The time delay is described in transfer function as follow:

$$\tau_d = \frac{1}{0.1s + 1}$$  

(10)

The MPC controller will be designed with sampling time $T_s = 1$. Prediction and control horizon will be having same length $n_p = 30$. Take note that, the concentration of the model is not taken into consideration because we will only focus on getting the desired output mass flowrate. The maximum and minimum values of the blender speed $(\omega_{\min}, \omega_{\max}) = (12, 12)$ are set to be the constraint of the system.

Three simulations are performed.

1) With set point of 30kg/hr for the process, the output mass flowrate, $\dot{m}_\phi$ is able to reach to the output reference mass flowrate, $\dot{m}_{\phi, ref}$. The result is shown in Figure B.1. The output delay is $T_D = 3.419$ with rise time at $t = 19.834$s. The overshoot is 12.13%. The steady state response is achieved at $t = 71.923$s. With MPC controller, the overshoot can be reduced by 50% and the time to reach steady-state is reduce by 93s. Next with the set-point changes of 60kg/hr as can be seen, again the response curve of the outlet mass flowrate, $\dot{m}_\phi$, is able to reach to the output reference mass flowrate, $\dot{m}_{\phi, ref}$ with lower overshoot and faster steady-state response.

This shows that with the MPC controller, the system performance can be enhance by having faster steady-state response of the output mass flowrateand lower overshoot response which are better than PI controller. For both MPC(Simulation 1 only) and PI controller(Simulation 1&2), the error analysis is performed by using Integrated Square Error (ISE).

$$ISE = \int_0^\infty e^2(t).dt$$
By using ISE, it will penalise the large errors more compared to the smaller ones that occur in the system. It also tends to remove the large errors as soon as possible and leads to a fast response. The result of the error can be acquired from Table 2.

From the result, it clearly shows that MPC having lower error compared to PI in dealing with the set point tracking and set point-changes.

### Table 2: Error analysis

<table>
<thead>
<tr>
<th>Control Strategy</th>
<th>ISE</th>
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<tbody>
<tr>
<td>(Simulation 1 only)</td>
<td></td>
</tr>
<tr>
<td>PI</td>
<td>1.946e+06</td>
</tr>
<tr>
<td>MPC</td>
<td>8.52e+05</td>
</tr>
</tbody>
</table>

(2) For the second simulation, the set point is at 30kg/hr and disturbance is added to the system in order to study the effect of the fluctuation in the feed flowrate on the output mass flowrate, \( \dot{m}_o \). The main reason by having the disturbance into the system is to mimic the real-world conditions by choosing a step disturbance amplitude. The step-signal for the inlet mass flowrate \( \dot{m}_{1,i} \) is chosen to be -15kg/hr at time \( t = 80.0 \)s. Figure B.3 shows the result obtained from the simulation. From the figure, the system reached the steady-state response at \( t = 176.367s \).

(3) For the third simulation, both inputs response for constraint and unconstrained systems are plotted with the set point of 30kg/hr. Figure B.5 shows the result obtained from the simulation. From the plot, it shows that the input response able to be subjected with the constraint. In comparison with the input response of PI-controller in Figure B.4, only MPC can be subjected with constraint.

In summary, by implementation of the MPC controller, the reference mass flowrate, \( \dot{m}_{o,ref} \) can be reached by taking account the constraint of speed of the blender in the manipulated variable. Furthermore, the system is able to adapt with the introduced disturbance performed in the simulation. Plus, from the error analysis itself, MPC having lower value of error compared to PI-controller.

### 4.0 Conclusion

In this paper, model-predictive control (MPC) is implemented to the feeder and blender unit with a direct feed through terms. The speed of the blender is treated as manipulated variable. From the simulation results and studies, MPC shows advantages compared to conventional PI-controller by having lower overshoot in the output response. Plus, the MPC-controller also able to reach faster steady-state response and keep the response near to the desired output reference mass flowrate, \( \dot{m}_{o,ref} \). Another topic of interest for the blender model is that, the concentration of the output mass flowrate can be controlled by the controller if the feeder set point is treated as additional actuating signals. In this current study, it only covers the comparison of MPC with the conventional PI-controller.
5.0 Simulation results

Figure B.1: PI and MPC controller setup result for constant inlet mass flow rate and set point changes

Figure B.2: Third PI simulation setup result for effect of disturbance

Figure B.3: Second MPC simulation setup result for effect of disturbance
6.0 References

Optimization of Laccase Adsorption-Desorption Behaviours on Multi-Walled Carbon Nanotubes for Enzymatic Biocathode

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ABSTRACT

In the context of shaping the better world, especially for medical and science areas, the implantable biofuel cells (IBFCs) are critically needed for the survival of patients subject to certain serious diseases. A long lifetime (in stable powering and current densities) without the need of surgical replacement after implantation, highly safe (biocompatible) and inexpensive biofuel cells are important in clinical aspects. Currently, implantable biofuel cells have been able to be implemented in the living organisms. IBFCs have been investigated for harvesting energy using glucose and oxygen, which are abundantly available in blood or extracellular fluids of living organism, to generate electricity continuously. However, IBFCs suffer with a sluggish electron transfer rate from the enzyme active site to the electrode. These may be due to insufficient enzyme immobilization, enzyme deactivation, and leaching out. Here we report for the first time laccase adsorption and desorption behaviours on the multi-walled carbon nanotubes (MWCNTs) via spectrophotometric, voltammetry, and calorimetric studies. The optimum condition for laccase adsorption is 5.0 mg mL\(^{-1}\) of laccase at PBS 0.01 M of pH 5.0. We found that laccase adsorption is a reversible phenomenon that depends on the nature of MWCNTs and the concentration of ionic strength in the enzyme solution. To prevent enzyme desorption, chitosan was introduced as a nanoporous reservoir in which laccase is confined and very favourable for their stability. Chitosan is able to protect ca. 97.2% of adsorbed laccase from MWCNTs during the first 6 hours. MWCNTs-Laccase-Chitosan biocathode (0.2 cm\(^2\) geometric area) was shown a stable OCP 0.55 V, current densities 0.33 mA cm\(^{-2}\) at 0.2 V vs SCE, and stable for 20 hours of continuous measurements. This report opens new horizons for the studies of high performance laccase based biocathode via optimization of adsorption and minimization of desorption phenomena.

Keywords: laccase, enzymatic biocathode, spectroscopy, voltammetry, calorimetry

1. Introduction

Implantable biomedical devices are critically needed for the survival of patients subject to certain serious diseases such as bradycardia, fibrillation, diabetes, and other disabilities [1]. Long term and stable powering of an implantable biomedical device through highly safe
(biocompatible), efficient (in power and current densities), and convenient biofuel cells are very important in clinical aspects. The biofuel cell must be cost effective to operate for a very long lifetime without the need of surgical replacement after implantation. This prospect has been the target of many researchers in over the last five decades, with current biofuel cells reaching the development stage for potential implantation in living organisms [2-5]. Enzymatic biofuel cells (EBFCs) appear as the promising candidate. EBFCs have been investigated for harvesting energy using glucose and oxygen as the biofuels, which are both abundant in blood or extracellular fluids of living organisms [3-7]. EBFCs can generate electricity continuously for implantable biomedical devices such as a deep brain stimulator, pacemaker, and cochlear implant [4-6].

EBFCs are designed to generate electric current from bio-electrocatalyzed chemical redox transformations. Compared to well-known metal catalysts such as platinum or palladium in conventional fuel cells, the attraction of enzymes lies in their high specificity and selectivity. EBFCs have a specific activity towards their respective substrates and ability to achieve high catalytic turnovers at mild conditions (20-40°C within a pH range 4-8 or even at neutral pH) [3,8]. Unfortunately, EBFCs also suffer with sluggish electron transfer rate from the enzyme active site to the electrode and low enzyme catalytic activity. These were due to insufficient enzyme immobilization, enzyme deactivation and leaching-out [9,10].

Several critical challenges currently exist in fabricating high performances EBFCs. First, the three dimensional structure and catalytic active site of the enzyme should be maintained to ensure effective biocatalytic conversion and achieve high current densities. Second, effective electron communication between the electrode and the immobilized enzyme should be ensured since the electroactive site of most redox enzymes is buried in deep pockets of the three-dimensional structure of protein [7,8,10,11]. To tackle these challenges, advanced materials and enzyme immobilization strategy are crucial [12,13]. By improving enzyme loading and enhancing the lifetime of enzymatic biosystems toward enzyme immobilization, effective EBFCs can be achieved [14-16].

The stability of the immobilized enzyme is depending on the nature and strength of the bonds with the support material, the conditions required for immobilization, and the degree of confinement [12]. Noncovalent approaches including adsorption and entrapment have been considered since the enzyme can be less denatured and the intrinsic electronic structure or properties of electrode material are preserved. Noncovalent interactions are somewhat labile, but have been used for establishing direct electron transfer (DET) with a variety of redox enzymes [8,23]. The simplest method of enzyme immobilization based on noncovalent interaction is physical adsorption. This method is easy to fabricate, no requires pre-treatment or chemical modification of enzymes, and preserves the conformation structure of the immobilized enzyme [17-21].

Enzymes used in EBFCs are derived from the oxidoreductase family that is able to catalyse oxidation and reduction reactions [13]. Laccase (benzenediol: oxygen oxidoreductase, EC 1.10.3.2) has previously been used in many biocathode studies. Laccase is one of the most commonly recognized multi-copper oxidases, consisting of four copper atoms and no other cofactors, i.e., one type-1 (T1) copper ion and three additional copper atoms including one type-2 (T2) and two type-3 (T3 and T3’) copper ions. The reduction of O2 by laccase is initially
catalyzed by the T1 site which orients the O2 substrate near a hydrophobic binding pocket rich in \( \pi \) electron density. Therefore, we can utilize this unique property to establish a hydrophobic-hydrophobic interaction for laccase adsorption.

Nanomaterials can serve as an excellent support material for laccase immobilization, with carbon nanotubes (CNTs) providing promising candidates as building blocks of bio-electrodes. CNTs exhibit high specific surface for enzyme loading, mass transfer resistance, specific electrical and mechanical properties, biocompatibility, and high conductivity [21,22]. Two main types of CNTs are single-walled carbon nanotubes (SWCNTs) and multi-walled carbon nanotubes (MWCNTs). MWCNTs are comprised of several layers of graphite surrounding a central tubule, whereas SWCNTs only have the central tubule without the graphitic layer. SWCNTs are attractive for their specific surface area for enzyme interaction, but MWCNTs are desirable for their easier dispersibility and lower cost. Moreover, the specific nanowire morphology of MWCNTs allows intimate interactions with the active sites of laccase that favour DET, thus representing powerful configurations without any use of redox mediators. In this case, the open-circuit voltage and current density is maximised per volume unit.

The use of polymers such as chitosan and nafion was also widely investigated in order to increase the stability and longevity of the adsorbed laccase at the surface of MWCNTs [23-25]. Chitosan is a natural semi-crystalline polysaccharide derived from chitin, which is the second most abundant biopolymer after cellulose. Chitosan with a high degree of deacetylation (DD 85%) is chosen as it provides optimal properties in the case of implanted EBFCs. Chitosan with high DD is biocompatible, more stable and degradation is minimized [8, 23-29]. Nafion is a sulfonated tetrafluoroethylene based copolymer in form of viscoelastic responding to stress in a time-dependent manner. Nafion's unique ionic properties are a result of incorporating perfluorovinyl ether groups terminated with sulfonate groups onto a tetrafluoroethylene backbone. Nafion pores allow movement of cations but do not conduct anions or electrons. The specific properties of nafion provides the polymer with good biocompatibility, and stability in cell cultures as well as in human body [30].

Although many studies have shown that the amount of laccase adsorbed on a solid substrate is strongly influenced by the interaction between surface and enzyme, the level of adsorption or desorption can also be altered by a shift in the balance of the interactions involved, i.e., electrostatic forces, van der Waals forces, conformational entropy changes, and hydrophobic interactions [26,27,31]. The goal of this research is to study the physical adsorption-desorption behaviour of laccase on MWCNTs in order to fabricate stable enzymatic biocathode. We also investigated the effects of MWCNTs surface functional group and presence of polymer matrix on the adsorbed or desorbed laccase through electrochemical and spectrophotometric measurements. We believe these studies are not sufficiently discussed in literature. To the best of our knowledge, there are no studies concerning the optimization parameters affecting the stability of adsorption and minimizing desorption of laccase on MWCNTs.

2. Experimental
MWCNTs and MWCNTs-NH2 (diameter 10-15 nm, >95% purity) from Nanocyl S.A. and laccase from white rot fungus Trametes versicolor, EC 1.10.3.2, from Amano Enzyme Inc., were used without any purification. Chitosan (medium molecular weight), disodium phosphate (Na2HPO4), monosodium phosphate (NaH2PO4), 2,2′-azino-bis(3-ethylbenzothiazoline-6-sulphonic acid) ABTS, were purchased from Sigma Aldrich and used as received. All aqueous solutions were prepared using ultrapure water (deionized water, resistivity 18.2 MΩ cm at 25 °C) from Purelab Prima system.

Spectrophotometric measurements were performed with a UV Spectrophotometer (Jenway, Genova) to determine the absorbance level of laccase activity, adsorption and desorption behaviours. Electrochemical measurements were performed with multichannel Potensiostat Bio-Logic VSP-300 measuring triplicate electrodes simultaneously using a traditional three-electrode setup consisting of a saturated calomel reference electrode (SCE) and a platinum wire counter electrode. The morphology of biocathodes was characterized by Scanning Electron Microscopy (SEM) using an ULTRA 55 FESEM based on the GEMENI FESEM column with beam booster (Nanotechnology Systems Division, Carl Zeiss NTS GmbH) and tungsten gun. A Thermometric 2225° Precision Solution Calorimeter (Thermometric AB Sweden) was used to measure the enthalpies of laccase adsorption. The temperature of the calorimeter solutions was controlled by a Heto precision buffer bath. 10.0 mg of MWCNTs were placed in glass crushing ampoules (1 mL volume).

2.1. Immobilization of Laccase

Immobilization and stabilization of laccase at MWCNTs have been critical for the development of enzymatic biofuel cells. Laccase solution in 1 mg ml⁻¹ was prepared in 0.01 M phosphate buffer solution (PBS) pH 5.0 and stored at 4°C prior to use. The adsorption process was carried out by incubating MWCNTs and MWCNTs-NH2 respectively in laccase solution, with certain pH, under medium speed of stirring during overnight, filtered under vacuum pump then dried in ambient temperature. For spectrophotometric studies, 2.0 mg of MWCNTs and MWCNTs-NH2 separately incubated in 2 ml of laccase in different parameters (see below).

2.2. Preparation of Laccase Biocathodes

Chitosan powder was dissolved in 0.5% (v/v) acetic acid at 50 °C and a clear viscoelastic gel formed after two hours stirring at ambient temperature. Nafion-bromide gel synthesized within the TIMC-IMAG lab was used also as a polymer matrix. An amount of 15 mg of either MWCNTs-Laccase or MWCNTs-NH2-Laccase were mixed with and without an appropriate amount of chitosan or nafion-bromide gel separately. The resulting homogenous paste was then compressed in a hydraulic press to obtain a pellet with a diameter of 5 mm and thickness of 2 mm. A copper wire is connected to one circle side of the pellet by a conductive adhesive. The perimeter and the covered side of the pellet were isolated with silicone glue, leaving one side of the pellet (geometrical surface area of 0.2 cm²) that corresponds to the electrochemical surface of the biocathode. The biocathodes were dried at ambient temperature and kept in a sterile bottle prior to usage. The addition of chitosan or nafion gel prevents the release of laccase molecules and reinforces the biocathode structure. The main advantage of this method is the optimization of laccase wiring onto MWCNTs or MWCNTs-NH2 while favouring direct electron transfer inside the three-dimensional matrix.
2.3. Spectrophotometric Analysis

The enzyme adsorption on MWCNTs is an equilibrium condition, thus the coexistence of adsorbed and desorbed laccase over MWCNTs appears to be a natural phenomenon. The amount of adsorbed and desorbed enzymes depends on the affinity of the enzyme to be adsorbed on nanomaterials (figure 1).

Figure 1. Kinetic of Enzyme Adsorption

Measuring the adsorption affinity and optimizing the MWCNTs properties that led to $K_1 \gg K_2$ (quasi-reversible) is very important to limit the enzyme desorption behaviour. By UV-Vis spectrophotometer we measured the specific activity of free laccase and its activity until several days, specific activity and the quantity of the adsorbed and desorbed laccase on MWCNTs or MWCNTs-NH$_2$ in different surface functional groups, pH, and ionic strength.

2.4. Electrochemical Analysis

The direct electron transfer (DET) of adsorbed laccase on MWCNTs and MWCNTs-NH$_2$ (with and without incorporation of polymer matrixes) using open circuit potential (OCP), cyclic voltammetry (CV), and chronoamperometry (CA). All OCP measurements were performed within potential scanning of -1V to 1V to obtain the laccase redox potential. All CV was performed at scan rate of 0.2 mVs$^{-1}$ with potential scanning of -1V to 1V vs SCE to observe the reduction peak that indicates laccase is adsorbed on the electrode’s surface and corresponds to their capacitive current. All CA measurements were performed with $E_i$ vs Reference at 200 mV, recorded every $\Delta t/A$ 1.0 s, with potential scanning of -1V to 1V to assess the delivered current density that correspond to the stability of the laccase-based biocathode.

3. Results and Discussion

3.1 Free Laccase Activity in Solution

The specific activity of free laccase at the concentration of 1 mg ml$^{-1}$ in 0.01 M PBS pH 5.0 was determined by using ABTS as a substrate for the enzymatic reduction of dioxygen into water. As one unit of laccase activity is defined as the amount oxidizing 1 μmol of substrate per minute, the laccase activity is 0.716 U mg$^{-1}$. Laccase activities continue to decrease as a function of time. After one week of observation, we found that laccase activity gradually decreased as function of time, becoming 0.716 U mg$^{-1}$ (0%), 0.433 U mg$^{-1}$ (39.53%), 0.367 U mg$^{-1}$ (48.74%), 0.333 U mg$^{-1}$ (53.45%), 0.217 U mg$^{-1}$ (69.74%), 0.200 U mg$^{-1}$ (72.07%), and 0.200 U mg$^{-1}$ (72.07%) each day respectively. The decreasing activity and low stability of laccase as described in figure 2 are one of the major drawbacks for the practical application of enzymatic biofuel cells. Therefore, immobilization of these free laccase on the conducting material plays a key role in extending their lifetime.
3.2. Kinetic Adsorption of Laccase

The kinetics of enzyme adsorption was studied by electrochemical measurements. The adsorption of laccase on MWCNTs electrode is a very slow phenomenon that takes place over several hours. Indeed, figure 3 show the in situ evolution of the OCP of a MWCNTs electrode in 0.01 M PBS pH 5.0 before and after the injection of concentrated laccase solution. Injected laccase into PBS solution induces an increase of the OCP value from 0.32 V to 0.54 V. The last value corresponds to the laccase redox potential. To confirm these results, we studied the in situ laccase adsorption under a cell voltage of 200 mV. Results show clearly that the anodic current value increases after laccase addition, followed by the appearance of cathodic current. This current is related to the electro-catalysis of laccase.

Figure 3. The OCV evolution of MWCNTs electrode by laccase injection in situ.

Furthermore, after laccase adsorption and under operational conditions (in the absence of laccase in PBS) the current decreases by ca. 40%. The decrease was attributed to desorption of ca. 60% of the adsorbed laccase as measured by spectrophotometry. This demonstrates that laccase adsorption on MWCNTs is reversible phenomenon.

3.3. Thermal Analysis of Laccase Adsorption

To study thermodynamic and kinetic behaviours of the adsorbed laccase in MWCNTs, isothermal calorimetry (IC) was used since it allows a direct measurement of thermal activities (heat flux) in adsorption process. The IC titration showed an exothermic interaction between MWCNTs and laccase suggesting an adsorption of enzyme on the MWCNTs. The kinetics of laccase adsorption seems to strongly depend on the nature of the CNTs surface, and may vary from a few minutes to several hours to days.

Figure 4. Chronoamperometry response at 200 mV during laccase adsorption process

3.4. Laccase Adsorption: Comparison of MWCNTs and MWCNTs-NH2
Laccase adsorption on MWCNTs depends on the surface functional group of carbon nanotubes. Amine (-NH2) functionalized carbon nanotubes, MWCNTs-NH2, can provide strong covalent interaction between the amine group and the polymeric matrix.

Table 1. Laccase adsorption in MWCNTs and MWCNTs-NH2

<table>
<thead>
<tr>
<th></th>
<th>MWCNTs</th>
<th>MWCNTs-NH2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Δ Abs</td>
<td>0.003</td>
<td>0.008</td>
</tr>
<tr>
<td>Solution (U mg⁻¹)</td>
<td>0.050</td>
<td>0.133</td>
</tr>
<tr>
<td>Adsorbed (U mg⁻¹)</td>
<td>0.666</td>
<td>0.583</td>
</tr>
</tbody>
</table>

Table 2. Results of BET measurements on MWCNTs-Laccase pellet with and without chitosan

<table>
<thead>
<tr>
<th></th>
<th>Surface Area (BET m²g⁻¹)</th>
<th>Pores Volume (cm³g⁻¹)</th>
<th>Average Pores (nm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MWCNTs Pellet</td>
<td>280</td>
<td>1.30</td>
<td>16</td>
</tr>
<tr>
<td>MWCNTs-Chitosan Pellet</td>
<td>282</td>
<td>1.20</td>
<td>17</td>
</tr>
</tbody>
</table>

According to BET measurement, MWCNTs exhibit higher surface area (6-times) and pore volume (5-times) than MWCNTs-NH2. With high surface area, 280 m² g⁻¹, and high pore volume 1.30 cm³ g⁻¹, MWCNTs can increase the laccase loading and facilitate reaction kinetics. The amount of immobilized laccase is higher in MWCNTs (ca. 93.02%) where the substrate can easily diffuse into the porous channels of supports.

3.5. Laccase Adsorption: Effect of Ionic Strength

To study the effect of ionic strength during the adsorption of laccase on MWCNTs and MWCNTs-NH2, laccase was mixed with different concentrations of PBS pH 5.0. Laccase was found to be less adsorbed both in MWCNTs and MWCNTs-NH2 at higher concentrations of PBS.

Table 3. Laccase adsorption in MWCNTs and MWCNTs-NH2 with different ionic strengths

<table>
<thead>
<tr>
<th></th>
<th>MWCNTs</th>
<th>MWCNTs-NH2</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.01 M</td>
<td>0.01 M</td>
<td>0.15 M</td>
</tr>
</tbody>
</table>
Adsorbed (U mg⁻¹) 0.48 0.47 0.45 0.44 0.38 0.33  
% Adsorption 67.46 65.08 62.71 61.36 53.49 46.51

This indicates that laccase adsorption is strongly affected by electrostatic interactions between the charge of MWCNTs surface groups and the charge of laccase. Indeed, it was demonstrated [33] that in the case of electrostatic adsorption, increasing ionic strength decreases the amount of adsorbed enzyme because counter ions in the solution are compete with laccase for the adsorption on the MWCNTs surface. Some authors show that it is possible to remove adsorbed enzyme from a solid surface by increasing the salt concentration [33]. However, MWCNTs-NH₂ is more sensitive to the change of ionic strength. These results indicate that the contribution of electrostatic adsorption of laccase is more important in the case of MWCNTs-NH₂ than pristine MWCNTs.

3.6. Laccase Adsorption: Effect of pH Solution

Laccase was found to be more adsorbed on both MWCNTs and MWCNTs-NH₂ at an acidic pH of PBS. Most of the fungal laccase have optimum pH in the range of 4.0-5.0 [33-35]. The laccase used in this experiment, produced by Trametes versicolor, was found to express higher adsorption in MWCNTs (more hydrophobic than MWCNTs-NH₂) with specific activity at pH 4.2 and 5.0 being respectively 0.63 U mg⁻¹ (ca. 88%) and 0.58 U mg⁻¹ (ca. 81%).

<table>
<thead>
<tr>
<th></th>
<th>MWCNTs</th>
<th>MWCNTs-NH₂</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH 4.2</td>
<td>pH 5.0</td>
<td>pH 7.4</td>
</tr>
<tr>
<td>pH 4.2</td>
<td>pH 5.0</td>
<td>pH 7.4</td>
</tr>
<tr>
<td>Solution</td>
<td>0.083</td>
<td>0.133</td>
</tr>
<tr>
<td>Adsorbed (U mg⁻¹)</td>
<td>0.633</td>
<td>0.583</td>
</tr>
<tr>
<td>% Adsorption</td>
<td>88.41</td>
<td>81.42</td>
</tr>
</tbody>
</table>

During the 48-hours follow-up of the investigation, the adsorbed laccase activity at pH 4.2 and pH 5.0 was found to decrease only by ca. 6.5% and 3.0% respectively. Taking into this account, we prefer to choose pH 5.0 as optimum condition for laccase solution. Adsorbed enzyme activity was assessed being most unstable at physiological buffer pH 7.4 where the reduction of enzymatic activity was by ca. 30% after 48-hours.

3.7. Laccase Desorption: Comparison of Polymer Matrix

Polymers such as chitosan and nafion were investigated to understand their effect in increasing the stability and longevity of the adsorbed laccase at the MWCNTs surface. Chitosan and nafion were chosen due to their good biocompatibility, stability in cell cultures as well as the human body, and there is considerable research towards the fabrication of laccase-biocathode. Laccase desorption behaviour is studied using 3D biocathode pellets (MWCNTs-Laccase-Polymer or MWCNTs-NH₂-Laccase-Polymer) incubated in 0.01 M PBS pH 5.0 after
6 hours. The lowest desorption activity of laccase from MWCNTs was found in chitosan, 0.02 U mg⁻¹ (2.79 % desorption vs. free laccase 0.716 U mg⁻¹). Whilst, in the case of MWCNTs-NH₂, Nafion was shown an excellent protection effect (relatively no laccase was desorbed). The enhanced stability of the biocathode will be obtained by incorporating chitosan gels during the mixture with MWCNTs-Laccase. Whilst, nafion seems to be effective for MWCNTs-NH₂.

**Table 5. Desorption of laccase in MWCNTs and MWCNTs-NH₂ with different polymers**

<table>
<thead>
<tr>
<th>MWCNTs</th>
<th>MWCNTs-NH₂</th>
<th>Blank</th>
<th>Chitosan</th>
<th>Nafion Blank</th>
<th>Chitosan</th>
<th>Nafion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desorption (U mg⁻¹)</td>
<td>0.07</td>
<td>0.02</td>
<td>0.03</td>
<td>0.09</td>
<td>0.03</td>
<td>0.00</td>
</tr>
<tr>
<td>% Desorption</td>
<td>9.78</td>
<td>2.79</td>
<td>4.65</td>
<td>12.79</td>
<td>4.12</td>
<td>0.00</td>
</tr>
</tbody>
</table>

MWCNTs-NH₂ can establish more effective and stronger bonding forces with nafion matrixes by providing hydrogen bonds [32]. The MWCNTs-laccase cathode in the absence of polymer is not stable over time. In facts, 0.07 U mg⁻¹ (ca. 9.8% desorption) and 0.092 U mg⁻¹ (ca. 12.8% desorption) for MWCNTs and MWCNTs-NH₂ respectively. This demonstrates that laccase is stable only when it is entrapped in the chitosan-MWCNTs 3D matrix. The small amount of laccase release could thus be attributed to the weakening of polymer matrix (either chitosan or nafion) due to natural degradation over time. The mechanical properties are affected also by the swelling, which weakens the matrix and hence leads to the release of laccase into the solution. Considering the physical properties of CNTs functionalized surface (surface area, pore volume, average pore diameter) versus loaded enzyme and stability, MWCNTs-Laccase-Chitosan is preferable as biocathodes.

### 3.8. Biocathode Performances

Following characterisation of laccase adsorption and desorption behaviours with different parameters (see above), we developed an innovative strategy to prevent enzyme desorption (figure 5). This strategy is based on the creation near the enzymatic-MWCNTs surface a nanoporous reservoir in which laccase is confined. The advantage of such a strategy is laccase operational conditions are similar to the laccase adsorption conditions, which prevent laccase desorption. Moreover, the confined laccases in the nano-reservoir are located in a reduced environment, which is very favourable for their stability. In contrast to the existing state-of-the-art exiting strategy where the enzyme is located on the surface of a solid electrode, in our approach laccase and MWCNTs create an entity which forms the electrode. In this case, the amount of laccase in the biocathode is not limited by the available surface on the electrode.

First MWCNTs were placed in a 0.01 M PBS pH 5.0 for 12 hours, then filtered and dried under ambient temperature. Following this, MWCNTs were incubated into PBS solution containing 5.0 mg mL⁻¹ laccase during overnight. After vacuum filtration, MWCNTs-Laccase particles were mixed with a certain amount of laccase (still in solid form) and chitosan gels. This mixture was then mechanical compressed to obtain a rounded 3D biocathode pellet.
Figure 5. The strategy to prevent enzyme desorption.

3.9. Characterization of 3D Biocathode Structure

The nano structure of laccase based biocathodes at optimum parameter of adsorption with chitosan were examined by SEM to confirmed their high 3D surface.

Figure 6. SEM images of the cross-section of (A) MWCNTs-Laccase, (B) MWCNTs-Laccase-Chitosan.

Spherical structures attached to the nanofibers could be attributed to cross-linked laccase agglomerates. The highly porous matrix is formed by a dense and homogenous network of around 10 nm-thick MWCNTs. The chitosan matrix is composed of nanofibers with diameters varying from 20 to 30 nm (figure 6). These agglomerates are only visible in the cross-section of electrodes containing the laccase. The agglomerates are found distributed all over the MWCNTs framework, suggesting that homogenously dispersed biomolecules within the MWCNTs matrix. Laccase is not affected by the acidic conditions since its optimal pH ranges from 4.0 to 5.0, and it was successfully entrapped within the matrix of chitosan during the preparation of biocathode.

3.10. Electrochemical Performances of MWCNTs-Laccase-Chitosan

Here we report our MWCNTs-Laccase-Chitosan biocathode with all optimum parameter set up (see above). The average OCP was found 0.55 V vs. SCE that still continue to increase until reach the optimum redox potential at ca. 0.60 V.

Figure 7. OCP curve of MWCNTs-Laccase-Chitosan Pellet

CV measurement at scan rate of 0.2 mVs-1 in 0.01 M PBS pH 5.0 shows clearly a typical electro catalytic response of laccase connected to MWCNTs, characterized by a cathodic wave starting at 0.55 V. Unlike classical CV, there are no oxidation current for a cycle from 0.50 to 0 V, which indicates clearly that laccase is connected to MWCNTs and it keeps its electro-catalytic activity via oxygen reduction.
Figure 8. CV at scan rate of 0.2 mVs^{-1} of MWCNTs-Laccase-Chitosan in 0.01 M PBS pH 5.0

CA measurement showed a stable current density at 0.325 mA cm^{-2} at 200 mV vs SCE from 0.2 cm^2 geometric area of the biocathode during 20 hours. CA was delivered at ambient temperature and without O2 saturation.

Figure 9. Chronoamerometry at 200 mV of biocathode in 0.01 M PBS pH 5.0.

4. Conclusions

Laccase adsorption on MWCNTs is a reversible phenomenon which depends on the nature of the surface of MWCNTs and very slow process which needs several hours to be achieved. The amount of adsorbed laccase seems to depend on the concentration of ionic strength in the laccase solution for pristine and modified MWCNTs, which mean that laccase adsorption is derived from electrostatic attraction between negative charge of laccase and positive surface charge of MWCNTs. Our MWCNTs-Laccase-Chitosan biocathode shows stable OCP 0.55 V vs SCE and maximum current densities reached at 0.325 mA cm^{-2} via 200 mV vs SCE at 20 hours observation. This report opens new horizons for the studies of high performance laccase based biocathode via optimization of adsorption and minimization of desorption phenomena.

Acknowledgements

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References


ENVIRONMENTAL SURVEY AND PHOTOGRAPHIC DOCUMENTATION OF A
FOREST EDGE HAMLET SITUATED IN THE EASTERN HIMALAYAS, INDIA

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ABSTRACT

The Eastern Himalayas have major contributions in maintaining climatic and ecological balance in the Indian Subcontinent with their forests areas and watersheds. Many scattered hamlets are found in this zone and some of them are proximate to the forests enriched with endemic biodiversity. Charkhole (27°06'16"N, 88°30'54"E) is a small village situated in Kalimpong district, West Bengal, India and proximate to Neora Valley National park. The survey work was done in December, 2016 by visiting Charkhole village in Kalimpong, West Bengal. The survey work integrates the perspectives of human and social ecology, ecosystem services and sustainable development. Primary data were gathered through field survey and direct contact with common people and authorized centres of the region. Structured questionnaires and semi-structured interviews supplemented by field notes were arranged to collect data from the village areas in upper and lower Charkhole. Focuses were given on demography, agriculture, livestock management, traditional water management, education, culture, health, waste management, disaster management, transport, biodiversity, joint forest management, ecosystem services and human animal conflict. Photographs were taken, analysed and interpreted in light of the survey data collected from the study area. Some of the feasible management strategies have been suggested for maintaining the socio-ecological and economic structures of the hamlet. The present survey work could be implemented in other ecologically important forest edge hamlets of Eastern Himalayas for biodiversity and traditional ecological knowledge conservation.

Keywords: Biodiversity; Environment; Forest; Survey; Sustainable development.

1. INTRODUCTION

The Eastern Himalayas are considered as the meeting grounds for the Indo-Malayan, Palaeartic, and Sino-Japanese bio-geographical realms with diverse ecological and altitudinal gradients and an associated diversity of flora and fauna (ICIMOD, 2010). The welfare of millions of people downstream is linked with the natural resources of the Eastern Himalayas. The major challenge to the local inhabitants of Eastern Himalayas is to use natural resources in a sustainable manner. People are an integral part of the landscape, as they derive various ecosystem services such as provisioning (eg food, fodder); cultural (aesthetic, religious); supporting (soil formation and water cycle); and regulatory (erosion, climate) services (Chettri et al., 2007).

Charkhole (27°06'16"N, 88°30'54"E) is a small village near Neora Valley Forest (Fig. 1) under Kalimpong sub division 1 (Samalbong village panchayat) in Darjeeling district. It is just
26 Km from Kalimpong town and 15 km from Lolegaon in West Bengal, India. Charkhole is situated at an altitude of 5000 feet in a green valley with magnificent views of Mt. Kanchenjungha (Fig. 2). It is one of the newest tourist destinations in the Eastern Himalayas. Situated in the deep, moist woods of towering pine, cypress, oak and rhododendrons, Charkhole hamlet is also a major attraction for the bird watchers.

Charkhole is divided into the upper and lower parts. Previously, the upper Charkhole was used for cattle grazing and bathing. The area was called “Charkhole Aal” (aal in local language means the bathing pond of cattle). Gradually the area developed as a village and tourism business has been flourished in Charkhole in the last 7 years.

2. METHODS

The survey work was done in December, 2016 by visiting Charkhole village in Kalimpong, West Bengal. The present study focuses on an interdisciplinary understanding on the physical and cultural environment of the forest and mountain areas. The survey work integrates the perspectives of human and social ecology, ecosystem services and sustainable development. Primary data were gathered through field survey and direct contact with common people and authorized centres of the region. Structured questionnaires and semi-structured interviews supplemented by field notes were arranged to collect data from the village areas in upper and lower Charkhole. The length of each interview was about 40–50 minutes and was supplemented by field notes. The interviews were conducted in the local dialect (which comprised of mixture of Bengali and Hindi).

In these villages, families have traditionally delegated decision making rights to the head of the household regarding social and economic issues. Considering this fact, data was collected from the household heads of the families. Structured questionnaires were used to identify socio-economic status of the households. Semi-structured interviews supplemented by field notes were used to study the dependence of villagers on ecosystem services. Focus were given on demography, agriculture, livestock management, water management, education, culture, health, waste management, disaster management, transport, biodiversity, joint forest management activities, Non-timber forest product usage and human animal conflict. Demographic information was collected from the village area and from the local Panchayat. Health and education information was collected from the local schools and local sub health centers. Information regarding the transportation was collected from the local transport syndicate. Biodiversity of the region was documented by visiting the adjacent forest areas, accessing the database of West Bengal Forest Department Office and visiting the nature interpretation centre situated at Neora Valley National Park. Photographic documentation was done in every phase of the survey work (Bhattacharya and Ghosh, 2014; Bhattacharya et al., 2016).

3. RESULTS AND DISCUSSION

3.1. Population

There are 87 families in upper Charkhole and 110 families in lower Charkhole with total population of 423. Approximately 90% of the people are Buddhist and the rest are Hindus. The Buddhist community comprises of ethnic groups of Gurung and Tamang, while the Hindu community has ethnic groups of Rai, Thapa and Chetri. Agriculture, tourism and business are the main occupations of the inhabitants.

3.2. Agriculture and Livestock management
The Eastern Himalayan region is known as the ‘centre of origin of cultivated plants’ as original locations of over 50 important tropical and sub-tropical fruits, cereals, and rice are in this region (Hore, 2005). Out of approximately 800 species used for food in India, about 300 species are found in North East India (Rao and Murti, 1990). In the hill areas of Charkhole, terrace cultivation or step cultivation is practiced. It is method of growing crops on sides of hills or mountains by planting on graduated terraces built into the slope. This labour-intensive method has been employed effectively to maximize arable land area in variable terrains and to reduce soil erosion and water loss (Bhattacharya and Ghosh, 2014). Local green houses are made for cultivation in some places in the village.

The common cultivable edible plants at Charkhole are potato, sweet potato, maize, garlic, ginger, squash, green peas (Fig. 3), spinach, round chilli (Fig. 4), Aloe vera (Fig. 5), raysak (Fig. 6), large cardamom etc. The inhabitants of Charkhole usually practiced organic farming, cowdung is used as manure. Rainfed Irrigation system is generally practiced in the agricultural fields. Occasionally spring water is used for irrigation during the period of water crisis.

Large cardamom (Fig. 7) and broom grass (Fig. 8) are the commercial plants cultivated at Charkhole. Broom grass (Thysanolaena maxima) is considered to be one of the important non timber forest produce species in North-East India which has good potential for generating local employment and can enhance rural income. It is a cash crop for its inflorescences that are used in making brooms. The stems of these plants are also used for wall building material. The woody stems are used for fuel and fencing purposes. The fibrous root system of broom grass is useful for checking soil erosion in the steep slopes. Broom grasses are abundant at Charkhole, where they grow by natural regeneration.

Large cardamom (Amomum subulatum Roxb) is one of the oldest spices known to mankind. The cultivated cardamom has about 12 local varieties and seven species of wild relatives readapted to different agro-climatic conditions of the Eastern Himalayan region. The crop was first domesticated by the indigenous Lepcha tribe and then by other communities Bhutias and Nepalis of Sikkim and was later passed on to the neighbouring Darjeeling district of India, parts of Bhutan and eastern Nepal (Sharma et al., 2000). Recently degeneration of cardamom is observed mainly due to the viral diseases such as chirkey and phurke. In Sikkim the cardamom yield has substantially reduced (Sharma, 2006). Disease control measures in the form of uprooting and drying of the infected plants and/or either burning or burying of infected plants are commonly practiced (Srinivasa, 2006). At Charkhole, the farmers reported that the production of large cardamom has gone down in the recent years due to shortage of water and climate change. This crop is widely used as a spice, flavoring agent, confectionaries, making perfumes, and medicines. Large cardamom cultivation is practiced at Charkhole village by using organic manures like cow dung, poultry wastes and goat dung. Compost is prepared in almost every household by using the daily household organic waste materials.

Most of the houses at Charkhole have cultivable lands adjacent to the houses and farming is done there. Agricultural production is one of the main economic sources of the people of this area. They use to sell the foods in the markets after production. Large Cardamom and the broom grasses are harvested and sold in the local markets of Kalimpong and Siliguri.

The common livestock at Charkhole are local breeds of cows, goats and pigs (Fig. 9 and 10). Almost every household has small poultry farm with cow and goat shelters in their own backyard. Meat, eggs and milk are the main livestock products which are among the important economic sources. The waste generated by thelivestocks are turned into organic manure and used in the agricultural fields.

3.3. Water management
The main water source of Charkhole is the water coming from the hills through natural water channels like “jhoras” (local springs). The springs flow below the ground and natural filtration of water happens while passing through the soil layers. Network of pipelines distribute the water from the cisterns to the houses. Each house has its own water collecting and storing unit from which they get the supply (Fig. 11).

In lower Charkhole, adequate water supply is available for the villagers. There are several “jhoras” or local springs present within close proximity of lower Charkhole. In upper Charkhole, there is problem regarding water supply as there is only one “hora” located 11 km away from the hamlet, from where the water is being supplied by the means of pipelines.

The survey revealed that in the last few years the local stream water flow has decreased during summers and has negatively impacted water availability for domestic and irrigation use. March to May is the period of water crisis in upper Charkhole, when people used to bring water from the local “jhoras”. Even the resorts and home stays developed recently for tourism purpose suffer from water shortage during the period. Rainwater harvesting is not a common practice among the inhabitants, however, they have developed a “water society” for proper management of water resource. Caretakers are being appointed by the local villagers for maintenance of the water distribution systems and pipelines. Every family use to pay a fixed amount of money for management of water distribution system.

For sanitation and hygiene requirements, pit toilets were constructed by each household. However, these pit toilets do not follow the guidelines provided by the World Health Organisation (WHO, 2013) and can pose serious threat to nearby water streams and groundwater source.

3.4. Waste Management

At upper and lower Charkhole, the common waste materials generated are solid wastes, including plastic packets, paper boxes, plastic bottles, glass bottles, vegetable wastes etc. Vegetable wastes are used as cattle feed and for preparation of organic manure. Solid wastes are usually collected in bins. Every house used to burn all the solid wastes once in a week. The unburned materials are buried in the ground. Burial of bottles and plastic packets may have serious effects on the local ecosystems and biodiversity, however, there is no waste management system developed for carrying, segregating, transporting and processing of the waste materials. Sometimes plastic and glass bottles are recycled by selling in the local markets after use. Local villagers are concerned about the increase in waste generation because of recent development in tourism at Upper Charkhole.

The inhabitants of Charkhole used to bring the fuel wood from the forest area. Usually the rotten and low quality woods are used for burning purpose. They used to store the wood in the storehouses after bringing them from the forests (Fig. 12).

3.5. Economy

Agriculture and tourism are the main economic sources of the inhabitants of Charkhole. The people used to sell the agricultural and livestock products in the local markets. One of the major economic backbones of Charkhole is the production of Large Cardamom (Amomum subulatum), which are regularly produced and supplied to different places. The major portion of household income comes from selling the cardamom which is a high value crop compared to other farm produces. It is a less labour intensive and non-nutrient exhaustive systems compared to other cultivations. However, the post harvest methods and storage are still traditional in Darjeeling and Kalimpong hills, resulting in poor quality products with low market price
(Sharma et al., 2009). Sometimes the farmers store their products of one or more years for one time income when the market rate raises high. Large cardamom plantation area is declining in several places of Eastern Himalayas due to natural calamities such as draught, hailstorm, snowfall in plantations at higher agroecological zones, widespread occurrence of fungal diseases and viral diseases. The prime reason of cardamom plantation and agronomic yield decline is due to the infestation by viral diseases viz. Chirkey and Phurkey (Sharma et al., 2009). This is one of the reasons for production decrease sharply by about 30% in during 2005-2007. The above mentioned constraints and problems of diseases are seen in almost all cardamom growing areas of Sikkim and Darjeeling hills of West Bengal. The villagers of Charkhole experienced decrease in rainfall, unpredictable monsoons and disease outbreaks in large cardamom cultivation resulting in significant drop in production during 2005-2007. In recent times, the production has increased again in the region.

The tourism business has been flourished in Charkhole in the last 7 years. The spectacular view of the Himalayan ranges, forest and biodiversity are attracting tourists from different parts of India and abroad. Charkhole is attracting large number of tourists in recent times and the villagers have started developing home stays for the tourists. At present, there are 6 resorts and home stays in Charkhole. Local people are in support of tourism initiatives and considering it as an attractive option of earning money. Number of tourist remain maximum from October to December, followed by an above average tourist inflow during March-April and lowest inflow in the rainy season (June-September). The sources of information about Charkhole for the tourists are mainly website of the village, role of touring agencies and operators, daily newspapers and travel magazines. The web-based promotion of this less known destination along with the positive vibe in print media had been quite useful for attracting tourists and making direct contacts between tourists and community based service providers. At the community level, socially cohesive bonds have been observed among the inhabitants of Charkhole, which could be a strong regulating factor in community based ecotourism development. Moreover, the occupational structure of the villagers is changing because of increase in tourism opportunities.

3.6. Transportation

There are 7 private cars in Charkhole which connects the area with Lolegaon, Lava and Kalimpong town. The cars are generally available in the morning on sharing basis for going to Kalimpong and Siliguri. With the growth of tourism in Charkhole, cars are available for going to different parts of North Bengal and Sikkim. There is a transport syndicate situated in Lower Charkhole, from where the vehicles can be booked in advance. No bus is available in Charkhole; Car is the only mode of transport. Bus service can be available from Lolegaon and Lava towns, which are 15 km. and 28 km. from Charkhole, respectively.

3.7. Education, culture and health

There is a primary school upto 4th standard in Charkhole with 4 teachers and approximately 55 students. There is also a high school upto 12th Standard at Sukrabari area, which is situated around 4 km. from Charkhole. The higher education in colleges and universities, the inhabitants of Charkhole usually visit Kalimpong (15 km.) and Siliguri (80 km.) areas.

There is no hospital facility at Charkhole. However, there is a primary health centre situated nearby, where one doctor and 3 nurses are available for minor treatment. No operation facility is available in that health centre. For major treatments and operations, the inhabitants of
Charkhole visit the hospitals in Kalimpong town and Siliguri city. Basic medicines can be found in the local grocery shops of Charkhole, however, there is no medicine shop in the area.

In Charkhole, local food products are completely based on agricultural products and livestock products. Gundruk is considered to be the most popular local food in Charkhole. Gundruk is fermented leafy green vegetable and one of the national dishes in Nepal (Swain et al., 2014). It is served as a side dish with the main meal and is also used as an appetizer. Gundruk is an important source of minerals particularly during the off-season when the diet consists of mostly starchy tubers and maize which tend to be low in minerals. Sinki is a preserved vegetable, similar to Gundruk, is prepared from radish tap roots. To make this generations-old indigenous dish, aged radish slivers are pressed into a hole lined with bamboo and straw, then coffin by a cover of vegetation, rocks, wood and, finally, mud. After a month of bacterial curing, the resulting preserved vegetable is dried in the sun and stored to last a few years or more. Sinki is generally consumed in the forms of soup and pickle by the local inhabitants of Charkhole.

In Charkhole, the Buddhists celebrate festivals like Buddha Purnima, Domong Puja and Losar. Losar is the Buddhist festival (“Losar” in Tibetan language means New Year), which is celebrated for 15 days, however, the main celebration occurs in the first three days (29th-31st December). The Hindus celebrate the Durga Puja and Saraswati Puja for worshipping the goddesses.

3.8. Ecosystem services

In India, there is a strong relation between the people and the forests because the people living in and around the forests are considerably dependent on the forest resources for subsistence, commercial and cultural purposes. NTFPs collection is another important source of income for the villagers of Charkhole. They use small timber for house construction and firewood as household fuel. The villagers also collect local bamboo species and use them in roof construction. Sometimes they collect edible roots and tubers, mushrooms, leaf litter and leaves, flowers and fruits as substitute of staple foods especially during lean seasons (Das, 2005). Most of the villagers cultivate medicinal plants in the farmlands adjacent to their houses. Aloe vera is widely cultivated in Charkhole. Other local medicinal plants for cultivation include Banmara (Eupatorium cannabinum), Tite pati (Artemisia vulgaris), Okhar (Juglans regia), Lali gurans (Rhododendron arboretum), Chirauto (Swertia chirata) etc. The villagers cultivate the medicinal plants for personal uses. Honey production is also an important source of earning. The inhabitants used to make artificial wooden structures in which bees take shelter and store honey. They periodically collect the honey and supply it to market. Analysis of semi-structured interviews in the study area indicated the dependence of people on forest ecosystems through the provision of ecosystem services.

3.9. Disasters

Kalimpong is under rapid habitat destruction due to several anthropogenic pressures and developmental activities like hydro-electrical projects, development of roads, establishment of tea gardens, mining and quarrying, landslides, forest fire etc. These factors jointly have increased the fragility of the mountains, leading to an increase in the incidence of landslides in the region (Bhattacharya, 2016). In Charkhole, road side small landslides are very common. The inhabitants also reported about the thunderstorm hazards in Charkhole, resulting in human deaths every year. Besides, the area is also earthquake prone; small earthquake incidences are experienced in Charkhole. Both the upper and lower Charkhole were affected during the disastrous earthquake in Nepal in 2015. Approximately 70% of the houses were mildly to severely damaged during the earthquake. The houses made of concrete experienced more
damage than the wooden houses. In some places, the cracks were formed in the roads, which affected the transportation system. The villagers had very limited means to cope with natural disasters due to remote location and hilly terrain.

3.10. Biodiversity

Charkhole is situated around 28 km. away from Neora Valley National Park (NVNP), which is located in the Eastern Himalayas as a global ‘biodiversity hotspot’. This area is included in one of the 25 Global Hotspots (Myers et al., 2000), the Global 200 forest ecoregions (Olson and Dinnerstein, 1998), two endemic bird areas (Stattersfield et al. 1998) and several centres for plant diversity (Davies et al., 1995). NVNP has wide range of environment gradients and climatic conditions, supporting a unique and ecologically important undisturbed patch of late succession forest. The park has a wide altitudinal variation (183–3,170 meters) and climatic conditions (tropical/sub-tropical in its lower range and temperate in its higher range). The climatic condition varies between tropical/subtropical in its lower range to temperate in its upper range (Mallick, 2010). In spite of being located in the Oriental Region, this park has some floral and faunal similarities with the Palaearctic Region of the adjacent zoogeographic zone. NVNP has been placed in the biogeographic zone 2 (Mallick, 2010). Moreover, it has characteristics of all the three sub-regions: Himalayan Montane System, Indian Peninsular sub-region and Malayan sub-region. The forest has total area of 88 km²; located between latitudes 26°52'03"N-27°7'35"N and longitudes 88°45'E-88°50'E. NVNP along with its adjoining forests of Kalimpong Forest Division is also an important ecological corridor in Eastern Himalayas for movement of long-ranging animals to and from other contiguous protected areas in North Bengal (Mallick, 2010). The forest has rich variety of habitats, as the area comprises the catchment and watershed of the Neora River. Four habitat types are recognized in NVNP: i) Subtropical Mixed Broadleaf Forest; ii) Lower Temperate Evergreen Forest; iii) Upper Temperate Mixed Broadleaf Forest; and iv) Rhododendron Forest (Mallick, 2010). It was notified as a protected area in April 1986 and was gazetted in December 1992.

The forest contains approximately 680 species of angiosperms, 23 species of pteridophytes, 276 species of insects, 38 species of other invertebrates, 308 species of birds and 33 species of mammals (Mallick, 2010). Approximately 20 % of the total species found in Neora Valley are extremely rare and many of those face the threats of extinction. Human settlements of late around this protected area have altered the biodiversity by means of habitat degradation.

A. Floral diversity:

The lower altitudinal zone or foothills (500 to 1,700m) of Neora Valley display characteristic subtropical vegetation. The dominant tall tree species (10-30m) include Duabanga grandiflora, Michelia champaca, Terminalia alata, Schima wallichii, Castanopsis indica, Ficus subincisa etc. The undergrowth vegetation includes Pandanus nepalensis, Maesa indica, Garuga pinnata and Holmskioldia sanguinea. The common herbs found in NVNP are Ageratum conyzoides, Oxalis corniculata, Urnea lobata, Eranthemum pulchellum etc. Above this zone, a small sub temperate zone is situated (1,700-1,900m) which is characterised by species like Ostodes paniculata, Ficus oligodon, Syzygium claviflorum, Ehretia serrata, Morinda angustifolia etc. The ecological zones situated between 1,900 and 3,150 meters receives comparatively high rainfall and has higher humidity than the tropical area, hence have rich vegetation with wide ranging biodiversity. The 15-25 meters high trees form a dense, closed canopy with plants like Michelia dolorosa, Magnolia campbellii, Alnus nepalensis, Rhododendron arboreum, Acer thomsonii, Juniperus pseudosabina, Abies densa, Pinus roxburghii, Cryptomeria japonica etc (Fig. 13). The common climbers are Thunbergia lutea,
Clematis nepalensis, Lonicera macrantha, etc. The rich undergrowth is comprised of species like Rubus paniculata, Viburnum erubescens, Astilbe rivularis, Strobilanthes thomsonii, Hedychium coccinium etc. Herbaceous flora are represented by Primula listeri, Swertia dultula, Rumex nepalensis, Polygonum orientale etc. Except in the very high altitude areas (above 3000 meters) the trees and shrubs are festooned with thick growths of epiphytic flora such as bryophytes, pteridophytes, and angiosperms. Heterophytic angiosperms like Viscum, Loranthus, Balanophora, Aeginetia indica, and many others are also abundant. The bryophyte diversity includes Funaria sp., Hookeria sp., Asterella sp. etc. High diversity of orchids are found among which species of Acampe, Aerides, Bulbophyllum, Calanthe, Dendrobium, Eria, Thunia etc. are noticeable (Das, 2010; Mallick, 2010).

Neora Valley is enriched with Rhododendron diversity. Several species of Rhododendron like Rhododendron arboreum, R. falconeri, R. barbatum, R. dalhousiae, R. grande, R. triflorum etc. are found in the forest area. Wild flowers available in the forest are Touch Me Not (Mimosa putica), Railway Glory (Ipomoea cairica), English Primrose (Primula vulgaris), Wild Musk Melon (Cucumis melo) etc (Das, 2010).

Among the medicinal plants found in the Neora Valley forest, Chinese Pepper (Litsea Citrata) is used as Antidepressant, antiseptic, Insecticide, helpful in heart diseases and bronchitis; Manjistha (Rubia cordifolia) is used to detoxify blood and to dissolve obstructions in blood flow; Herbaceous Woodlander (Smilacina oleracea) root extract is used for curing fractures; Chirayata (Swertia chirata) is used as drug for intermittent fevers, skin diseases and bronchial asthma; Indian snakeroot/Sarpagandha (Rouwolfia serpentine) is used as drug for high blood pressure and schizophrenia; Ground pines/creeping cedar (Lycopodium sp.) is used for treatment of disorders of the locomotor system, skin, liver and bile, kidneys and urinary tract infections; Himalayan ginseng (Panax pseudoginseng) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Shilapushpa (Didymocarpus pedicellata) prevents the formation of urinary stones and has antimicrobial property. Jaributi valley of Upper Neora is famous for producing the most important medicinal plants (Mallick, 2010).

B. Faunal diversity:

There are 276 species of insects and 38 species of other invertebrates (molluscs, arthropods and annelids), including 6 species of leeches are found in NVNP (Singhal, 1999; Singhal and Mukhopadhyay, 1998). The Neora Valley is richly blessed with a medley of beautiful butterflies like Knight (Labadea Martha), Redbeast (Papilo alemenor), Common Grass Yellow (Eurema hecabe), Blue Mormon (Papilio polymnestor), Pale Grass Blue (Pseudozizeeria maha), Himalayan Five ring (Ypthima sakra), Common Lascar (Pantoporia hordonia), Tailed Red Forester (Lytheinix hermes), Yellow Orange Tip (Ixia pyrene), Indian Tortoise Shell (Aglaia carinata), Painted Lady (Cynthia cardui), Golden Saphire (Heliophorus brahma), Bath White (Pontia daplidice), Tiger Brown (Orinoma dambar), Punchinello (Zemeros flegyas) (Fig. 14) etc.

The Neora River runs for about 57.6 km. from north to south and is drained by 9 major streams and 16 subsidiary streams. This part of the Eastern Himalaya has a greater diversity of coldwater fishes than the other parts of the Himalayas. The fish species found in the Neora River are Balshohi (Nangra punctata), Goni (Labeo gonius), Hara (Hara jordoni), Lohari (Garra annandalei), Bumble bee (Laguvia shawi) etc (Das, 2010).

Amphibians found in NVNP are Common Tree Frog (Polypedates teraiensis), Himalayan Frog (Bufo himalayensis), Himalayan Bull Frog (Paa leibigii), Twin Spotted Tree Frog (Rhacophorus bipunctatus) etc (Das, 2010).

Twelve species of lizards and 47 species of snakes have been identified in this park. Reptiles like Flat-backed Mountain Lizard (Japalura planidorsata), Indian Garden Lizard (Calotes versicolor), Asian Glass Lizard (Ophisaurus gracilis), Flat Tailed Gecko
(Hemidactylus garnoti), Spectacled Cobra (Naja naja), Common Wolf Snake (Lycodon aulicus), King Cobra (Ophiophagus hannah), Indian Rat Snake (Ptyas mucosa) etc. are found in the NVNP (Das, 2010).

The semi-evergreen forests between 1,600 m. and 2,700 m. of Neora Valley are home to several rare species of birds and are considered as one of the most attractive places of ornithological study. Among approximately 300 bird species found in Neora Valley, 7 are globally threatened and 2 are near threatened, 12 species belong to the Red Data Book list (Mallick 2010). The Red Data Book enlisted species are Greater Spotted Eagle (Aquila clanga), Blue Fronted Robin (Cinclidium frontale), Broad-billed Warbler (Tickellia hodgsoni), Lesser Kestrel (Falco naumanni) etc. Other major species of birds include Black Eagle (Ictinaetus malayensis), White Tailed Robin (Myiomela leucura), Great Tit (Parus major), Green-backed Tit (Parus monticolous) (Fig. 15), Eurasian Tree Sparrow (Passer montanus) (Fig. 16), Ashy Wood Pigeon (Columba pulchricolis), Brown Parrotbill (Paradoxornis unicolor), Chestnut Thrush (Turdus rubrocanus), Black-throated Sunbird (Aethopyga saturata), Hill Myna (Gracula religiosa), Goldcrest (Regulus regulus) etc (Das, 2010; Mallick, 2010).

Neora Valley provides shelter and protection to various species of mammals included in Red Data Book of IUCN and appendices of CITES (Convention on International Trade in Endangered Species of wild flora and fauna). Red Panda (Ailurus fulgens), Gaur (Bos gaurus), Asiatic Black Bear (Ursus thibetanus), wild boar (Sus scrofa cristatus), Tiger (Panthera tigris), Leopard (Panthera pardus), Clouded Leopard (Neofelis nebulosa macrosceloides), Red Fox (Vulpes vulpes), Barking Deer (Muntiacus muntjak), Himalayan Palm Civet (Paguma larvata), Marbled Cat (Pardofelis marmorata), Leopard Cat (Prionailurus bengalensis horsfieldi), Asiatic Wild Dog (Cuon alpines), Malayan giant squirrel (Ratufa bicolor), Indian pangolin (Manis crassicaudata), Chinese pangolin (Manis pentadactyla aurita), Malayan giant squirrel (Ratufa bicolor), Hodgson’s flying squirrel (Petaurista magnificus), are significant mammals of Neora Valley. Discovery of tiger Panthera tigris tigris in 1998 prompted the forest department to include NVNP as a sensitive wildlife zone. The population of long-ranging mammals in NVNP like tigers, elephants and Indian bisons or gaur, fluctuates seasonally due to migration through the identified corridors, particularly along the riverbeds (Das, 2010; Mallick, 2010).

3.11. Human Animal Conflicts

Human-Wildlife Conflict (HWC) occurs when wildlife requirements overlap with those of human populations, creating costs both to residents and wild animals (WPC, 2003). Direct contact with wildlife occurs in both urban and rural areas, but it is generally more common inside and around Protected Areas. With increasing population and pressure on forest areas, human-wildlife interaction and resultant conflict is also increasing (Zubri and Switzer, 2001). Sikkim and Darjeeling, being a part of a global biodiversity hotspot (Myers et al., 2000), has diverse fauna which live in close proximity to human beings. In many instances, these communities are highly marginalized and live in difficult circumstances. Periodical wildlife attacks in the forest edge hamlets of the Eastern Himalayas affect the socio-economic structures of the local settlements. In Charkhole, the man animal conflict is mainly centred on the attacks of porcupines, rabbits, deer and wild boars in the agricultural fields. Raysak cultivation is affected because of rabbit attacks. Leopards rarely attack the livestocks. Fences are used in the agricultural field for protecting the plants from wildlife attacks. Snake bites are common in the village area; few people die every year because of snake bites.

4. SUSTAINABLE MANAGEMENT PROPOSALS
Charkhole has become the emerging tourist spot of West Bengal for pleasure trips, biological and geographical excursions and medical research works. In spite of getting so much attention in the recent time, the areas are not adequately developed. There is an urgent need for implementing sustainable management systems in the areas for the betterment of the socio-environmental structures. Some of the implementable management systems are as follows:

**Water resource Management:** For water crisis mitigation in Charkhole, focus should be on undertaking rain water harvesting along the hill slopes. Actions would also include identification of natural aquifers in the region. Micro scale rainwater harvesting structures should be constructed in the village houses. Household filter systems should be provided to the local inhabitants for using the collected rainwater for drinking purpose. Water storage and micro-irrigation equipment business can be developed by this group for the use of local villagers. However, the recognition of the group by financial services providers such as banks, local government, and establishment of proper training facilities remain major challenges in this context (Sandhu and Sandhu, 2014).

**Food security and agricultural development:** Enhancing the ecosystem services can lead to improvement of food and nutrition security. This can be achieved by deploying cost effective protocols such as crop rotation with legumes to fix atmospheric nitrogen in soil instead of nitrogenous fertilizers, enhancing functional agriculture biodiversity for managing insect pests instead of pesticides (Wratten et al., 2013).

Organic farming is one of the several approaches found to meet the objectives of sustainable agriculture. Organic farming is a production system that sustains the health of soils, ecosystem and the people. Encouraging and supporting the farmers towards Organic farming in Charkhole village can stabilize the ecology and economy together. Creation of community seed banks and preservation of germplasm of the indigenous varieties would ensure availability of the food resources in the future. However, impact of climate change on these varieties must be identified to develop measures to fortify them against adverse impacts when they are growing. Integrated pest management (IPM) systems could be implemented by scientists from the Agricultural, Horticulture, and Plant Pathologists (Sandhu and Sandhu, 2014).

**Health and Sanitation management:** Adequate health services should be provided to the local inhabitants of Charkhole. Local Sub Health centres with doctors, nurses and basic medical facilities should be established in these areas. Telemedicine facilities can be established in the hill villages like Charkhole. This is especially important for enabling people in remote areas to consult specialists and then seek right suggestion for treatment. The specialists in the private hospitals and retired specialists from government hospitals can be engaged for this service.

Pit toilets should be re-designed by using appropriate technology under the specifications provided by the WHO, which consequently could reduce the extent of groundwater and stream water pollution (WHO, 2013). Local youth can be trained in technical skills required for constructing and managing pit toilets and understanding how right technology can minimize impacts on surrounding ecosystems. However, the key challenges are training of local entrepreneurs in the technology and the financial assistance to learn technical skills and start small scale business (Sandhu and Sandhu, 2014).

**Energy management:** For cooking purpose, use of energy efficient and smokeless cook stoves can be promoted to increase efficient fuel usage and reduction in cooking time, lowering pollution from using fuel wood (Barnes et al., 1993; Pandey et al., 1990). Pellet fuel required for these cook stoves can be made from the biomass waste from agricultural activities. It can prevent unsustainable harvest of wood and fuelwood from the forest. Implementation of biogas
plant in *Charkhole* area can also reduce the pressure on fuel wood. Large scale installation of solar panels in these areas would be beneficial for having sustainable use of energy.

**Biodiversity conservation:** There is lack of gross knowledge among villagers on the advantages of afforestation in the hill areas. Specific training and awareness efforts from the Forest Department have to be undertaken to educate people on the drawbacks of deforestation and the long term effects it has on the climatic conditions. Ecological restoration should be done by restoring the damaged, degraded and areas destructed by landslides. Focus should be given on areas critically important to floral and faunal habitat, water catchments and areas important with social and cultural values. Community-based forest management systems can also help to increase carbon stock.

Like any other protected area in India, the forest areas of *Charkhole*, mainly the *Neora Valley* National Park suffer from illegal cattle grazing, firewood collection, encroachment on the fringes and poaching. However, due to inaccessibility and difficult terrain, the biotic pressures are still not very acute. More intense survey works and management practices should be done for mitigating the anthropogenic threats.

The factors responsible for the depletion of medicinal plant diversity are: a. Increasing demand of herbal products. b. Shrinking of natural habitat of medicinal plants due to population pressure and other developmental activities. c. Indiscriminate and over exploitation from natural sources. d. Less efforts for commercial scale cultivation. e. Forest fire. f. Illegal trading of banned high value medicinal plants, especially in *Neora Valley*. g. Overgrazing of livestock. h. Cutting of medicinal trees for fuel, timber, etc., and lopping of leaves for fodder and cattle bedding. i. Change in climate and weather pattern. Sustainable management planning of medicinal plant conservation could be implemented after considering the factors responsible for the depletion of medicinal plant resources.

Biopiracy is a major problem in Eastern Himalayas which can considerably affect the endemic plant diversity in the areas. *Neora Valley* national park is considered to be one of the richest medicinal plant diversity zones of India. Initiatives should be taken in *Charkhole* for promoting medicinal resources and giving economic support to build up private nurseries where several varieties of important plant species can be preserved. Local training centres should be established for teaching the local people about the importance of natural resources of *Charkhole*. The initiatives of the local people can effectively protect the natural assets of those areas. In the silviculture units, the plant varieties should be increased and more modern methods of conversation should be implemented associated with gene banks and extensive databases.

During the survey work, the local people reported that the number of birds at *Charkhole* has been reduced in recent times. Some of them pointed out that previously the birds could have shelters in the traditionally made rooftop of the village houses. Because of the increase in use of asbestos rooftops in many houses of *Charkhole*, the birds are not getting the shelters at the rooftops. Moreover, the birds are repelled when sunlight reflects on the shiny surface of the asbestos rooftop. Sustainable use of eco-friendly materials and local grass species can be promoted in *Charkhole* for rooftop construction, which can eventually increase the bird diversity in the area.

**Disaster Management:** Due to many anthropogenic activities, the land of Darjeeling is prone to landslide every year. Vegetative control measure of soil conservations should be adopted to protect further damage of land at and around the *Charkhole* forest areas. Promotion and implementation of vermicomposting techniques in this area can maintain the soil structure, agricultural productivity and waste reduction (WWF, 2009). Technology supported by finance to develop low cost earthquake proof and energy saving housing would be beneficial.
The effects of climate change are more severe in the Himalayas compared to the other regions (IPCC, 2007). The annual and seasonal temperature trends in the Kanchenjunga landscape indicate an increase at the rate 0.01 – 0.015°C/year, with higher altitudes experiencing greater warming (Singh et al., 2011). The Himalayan region, including the Tibetan Plateau, has shown consistent warming trends during the past 100 years (Yao et al., 2006). Likewise, among the administrative units, Darjeeling was the most vulnerable compared to Sikkim, eastern Nepal and western Bhutan. The major crops grown in Darjeeling district such as rice, wheat, pulses, and oil seeds are likely to experience decrease in production due to rise in temperature (Bhattacharya and Ghosh, 2014). Extensive studies on the effects of climate change on Charkhole should be done. Monitoring the climate change by establishing stations to meet long-term climatic data from Eastern Himalaya is the need of the hour.

**Pollution and waste management:** The vehicles used in the areas should be monitored regularly for mitigating the vehicular pollution in the forest areas. Installation of the modern devices in the vehicles for pollution control should be done and routine checking system should be implemented.

Separate waste collection and disposal system should be operated by the government for safeguarding the sensitive ecosystems of the areas. Effective management design should be done for plastic wastes generated in these mountain hamlets. Proper management of solid wastes through the methods of collection, storage, transportation, recycling and disposal should be implemented in the Eastern Himalayan hamlets.

**Economic development:** There remains the need for clearer understanding of resource flows to and from mountain areas. This will lead to increased income to mountain communities and a fairer distribution of earnings from natural resources exploitation and services provided. A number of innovative mechanisms, allowing a greater share of the proceeds from mountain-based economic activities to reach mountain people have to be continuously thought of and evolved. Creation of markets for channelizing the local products and establishment of distribution systems with strong communication could uplift the local economy of the village area.

**Tourism management:** West Bengal has constantly produced thoughts, ideas and events which have brought forth freshness and rejuvenation in the society both in India and the world. The specific components of cultural tourism can be implemented in these areas including Fairs and Festivals Tourism, Arts and Crafts Tourism and Village Tourism. Portfolio of tourism products should be developed by utilizing its unique ecological assets. As these areas are the attraction for tourists, development of handicrafts made from the forest bioresources could be beneficial for the socio-economic development of the local communities.

Tourism carrying capacity is defined as the maximum number of people that may visit the tourist destination without causing destruction of the physical, economic and socio cultural environment and an unacceptable decrease in the quality of visitors’ satisfaction. The carrying capacity assessment and sustainability of tourism in the circuits identified is an important component of the ecotourism study as it will form the basis for resource allocation and future development (Karmakar, 2011). The carrying capacity assessment should be done for Charkhole, based on the inflow of tourists and their activities.

**Research initiatives:** More mountain-specific investment programs and greater mobilization of financial resources for mountain development and conservation programs will be required. In some cases this may mean formulating and financing programs which are focused exclusively
on mountain areas. There are signs of greater willingness on the part of government to increase investment levels in mountain areas, which historically have been neglected.

National and International cooperation and grants should be enhanced for the conservation of Neora Valley National Park and its village communities. Research grants should be raised for exploring the social and biological status of the area. Training programmes, seminars and workshops should be organized for highlighting the conditions of Neora Valley National Park in international platforms.

5. CONCLUSION

The Eastern Himalayas, with a wide spectrum of ecological zones, is shared by Nepal, Bhutan, India, China and Myanmar. Many critical eco-regions and critical transboundary conservation complexes are of global importance. The area surrounding Mount Kangchenjunga is one of the richest landscapes of the ‘biodiversity hotspots’ and one of the world’s most critical centers of biodiversity (ICIMOD, 2010; Sharma and Chettri, 2005). Due to its strategic location between Nepal, India, Bhutan and China, it is an important area for biodiversity conservation and needs transboundary cooperation to make conservation efforts effective (Sharma & Chettri, 2005).

The present work is the first ever socio-environmental study done at Charkhole village till date. Extensive investigations at other hill areas of Eastern Himalayas should be done so that the places could be highlighted for conservation in future. Integrating the scientific and social approaches together can lead to a holistic and sustainable management perspective. This survey work and sustainable proposals can be followed in other ecologically sensitive forest edge hamlets of Eastern Himalayas for biodiversity and traditional ecological knowledge conservation. The major challenge for the ecologists and environmental scientists in the Eastern Himalayas is to ensure the modernization of the native cultural values by a careful, step-by-step transformation. The aim should be to provide lasting, synergistic benefits for the local people, their economy and culture in rural and semi-urban landscapes. The people of the Eastern Himalayan hamlets like Charkhole are gradually realizing the value of protected areas and their role in management and are willing to engage in major decision making. Bringing local communities into protected area management will have significantly positive impact on long-term biodiversity conservation in the transboundary Himalayan landscapes.

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All the photographic documentation is done by the corresponding author (Dr. Sayan Bhattacharya). Nikon D7000 Digital SLR with Nikkor 18-105 mm. VR lens were used for composing the images. All rights reserved.
Fig. 1: Neora Valley national park.

Fig. 2: Kanchenjungha in the Eastern Himalayas.

Fig. 3: Green pea cultivation at Charkhole.

Fig. 4: Round chilli cultivation at Charkhole.

Fig. 5: Aloe vera cultivation at Charkhole.

Fig. 6: Raysak cultivation at Charkhole.
Fig. 7: Large cardamom cultivation at Charkhole.

Fig. 8: Broom sticks cultivation at Charkhole

Fig. 9 & 10: Livestock management at Charkhole.

Fig. 11: Water storage at Charkhole.

Fig. 12: Firewood storage at Charkhole.

Fig. 13: Pine forest in NVNP.

Fig. 14: Punchinello butterfly in NVNP.

Fig. 15: Green backed tit in NVNP.

Fig. 16: Eurasian tree sparrow in NVNP.
7. REFERENCES


ABSTRACT

Eastern Himalayas have major contributions in maintaining climatic and ecological balance in the Indian Subcontinent with their forests areas and watersheds. Many forests are situated in the Eastern Himalayan zone in India which is enriched with biodiversity and endemism. A survey was conducted in a span of two years in the four protected areas situated in different altitudes. Two protected areas were selected in the high altitudes, Neora Valley National Park (NVNP) and Senchal Wildlife Sanctuary (SWS), which have high diversity of medicinal plants. Two protected areas were selected from the Himalayan foothills (Dooars area), Gorumara National Park (GNP) and Buxa Tiger Reserve (BTR), which serve as important migratory corridors. Neora Valley National Park (NVNP) in the Kalimpong Hills, Darjeeling District has a wide range of altitudinal variations (183-3,200 m) and climatic conditions; the forest types are mainly tropical, sub-tropical, temperate and sub-temperate. Neora Valley has approximately 680 species of angiosperms, 23 species of pteridophytes, 276 species of insects, 38 species of other invertebrates, 308 species of birds and 33 species of mammals. Senchal Wildlife Sanctuary (38.97 km²) ranges between 1500 -2600 m. with subtropical and temperate forest types. Gorumara National Park has 48 species of carnivores & herbivores, 193 species of birds, 22 species of reptiles and 27 species of fishes. Gorumara is a crucial migratory corridor of the Asiatic Elephant (Elephas maximus) and is also the residence of the great Indian one horned Rhinoceros (Rhinoceros unicornis). Buxa Tiger Reserve is located at the confluence of three major bio-geographic zones: the lower Gangetic plains, Central Himalayas and the Brahmaputra valley. BTR is biologically very rich and supports a tiger population (Panthera tigris). About 60% of the total floral endemic species of north-east India are observed in BTR. The biodiversity of these four protected areas were photographically documented by visiting the forests. Focuses were given on human wildlife conflict, non-timber forest produce (NTFP) collection, joint forest management and traditional ecological knowledge. Extensive study should be done in other protected areas of the Himalayas for the conservation of biodiversity and traditional ecological knowledge in the backdrop of climate change.

Keywords: Forest, Himalayas, Survey, Biodiversity.

1. INTRODUCTION
The Eastern Himalayas have major contributions in maintaining environmental and ecological balance in the Indian Subcontinent with their forest cover. The Bengal part of the Eastern Himalayas accounts for 3,086 sq km (26%) of the 11,876 sq km area of classified forests in the state, and most of the forested areas are situated in the Darjeeling, Kalimpong and Jalpaiguri district (Bhattacharya et al., 2015). A number of ecologically significant National Parks and Wildlife Sanctuaries are situated in this zone with high diversity of endemic species. Among them, Neora Valley National Park (NVNP) and Senchel Wildlife Sanctuary (SWS) are situated in the high altitude, while Buxa Tiger Reserve (BTR) and Goromara National Park (GNP) are situated in the Himalayan foothills or Dooars area. NVNP and SWS forms the part of the Kanchenjunga landscape (Chettri et al., 2007), whereas BTR and GNP forms the part of Dooars regions which is the floodplain of the eastern Himalaya in North-east India around the southern borders of Bhutan (Bhattacharya et al., 2016). These four protected areas have very high ecological diversity (Sharma, 2005) and forms the part of the Eastern Himalayan biodiversity hotspot (Kshettry et al. 2017; Bhattacharya et al. 2014). The landscape have gone through some major landscape modifications from the time of British era due to tea plantations and agricultural activities but now only part of these huge landscape is under forest cover. All of these protected areas are interconnected with one another by forested corridors, which help in the movements of wild animals. The inhabitants of many scattered hamlets situated around these protected areas are directly or indirectly dependent on the forest resources.

2. METHODS

The survey works were carried out from the year 2014 to 2016 in the forest areas. Primary data were gathered through field survey and direct contact with common people and authorized centres of the forest areas. Structured questionnaires and semi-structured interviews supplemented by field notes were arranged to collect data from the forest edge hamlets and forest offices. The length of each interview was about 40–50 minutes and was supplemented by field notes. The interviews were conducted in the local dialect (which comprised of mixture of Bengali and Hindi). Biodiversity of the regions was documented by studying and documenting the species, accessing the database of West Bengal Forest Department Office and visiting the nature interpretation centres situated in the protected areas. Photographic documentation was done in every phase of the survey work.

3. RESULTS AND DISCUSSION

3.1. Buxa Tiger Reserve (BTR)

Buxa Tiger Reserve (BTR) (figure 1) is situated in Alipurduar Sub Division of West Bengal, India. It comprises of the entire forest area of the erstwhile Buxa Forest Division (Created in 1877 – 78) and some territory of the erstwhile neighbouring Cooch Behar Forest Division (Buxa Tiger Reserve Reserve, 2015). The Reserve lies between Latitudes 23°30′ N to 23°50′ N and Longitudes 89°25′ E to 89°55′ E. The total area of the reserve is 760.87 km² of which 385.02 km² has been constituted as the Buxa Sanctuary and National Park and the rest 375.85 km² areas is considered as a buffer zone (Das, 2009). It has 37 forest villages and 4 fixed demand holdings, 46 revenue villages and 34 tea gardens in and around it. In BTR, Temperature varies from 15°C to 39°C and rainfall varies from 3570 mm to 5600 mm. The lowest point is 125 m. above mean sea level and highest point is 1750 m. above mean sea level (Roy and Sah, 2012). Most of the rainfall is received during June to September. Pre-monsoon showers occur during May.
BTR is located in the foothills of the outer Himalayas; hence it remains adequately humid throughout the year. The habitat is primarily tropical moist deciduous forest dominated by *Sal* tree (*Shorea robusta*). In addition, evergreen, semi-evergreen and riverine forest, scrub and grasslands are found, along with plantations of sal, teak (*Tectona grandis*), jarul (*Lagerstroemia reginae*), and mixed plantations of native trees (Sivakumar et al., 2006). BTR is located at the confluence of three major bio-geographic zones: The lower Gangetic plains, Central Himalayas and the Brahmaputra valley (Das, 2012).

BTR is biologically very rich and supports a tiger population (*Panthera tigris*). BTR represents several elements of the biodiversity of north-east India and is one of the most biodiverse regions in the country (Das, 2009). About 60% of the total floral endemic species of north-east India are observed in BTR. The reserve also act as a carbon sink of the region. It has a network of many perennial and seasonal rivers, which are the water sources of wild animals and plants. This is an international corridor of elephant migration (Das, 2009).

Buxa Tiger Reserve is biologically very rich. It represents several elements of biodiversity of northeast India, one of the most biodiverse Indian regions. Eleven landscape elements were identified in Buxa, which include, 1) Semi-evergreen vegetation forest, 2) dense evergreen forest, 3) deciduous forest, 4) dry thorn forest, 5) mixed vegetation and plantations, 6) degraded forests, 7) tea gardens, 8) teak plantations, 9) flood plains of the different rivers present in the reserve, 10) water bodies and 11) cultivation/settlements (Asian Nature Conservation Foundation, 2015). More than 50% of the plant species of India are represented in northeast India; of these, 60% are endemic. Most of the floral endemic species of northeast India are encountered in Buxa Tiger Reserve. The forest is enriched with 283 species of trees, 31 species of shrubs and herbs, 33 species of climbers, 150 species of orchids, 36 species of grasses and reeds, and 7 species each of cane and bamboo. The most common species found within the forest is *Sal* (*Shorea robusta*), which is one of the ecologically and economically important trees of BTR. The lofty Sal trees occur with their usual associates, viz. Champ (*Michelia champaca*), Chilalune (*Schima wallichii*), Chikrashi (*Chukrasia tabularis*), Bahera (*Terminalia bateria*), Sidha (*Lagerstroemia parviflora*), Toon (*Cedrella toona*), Laii (*Amoora wallichii*), Lausuni (*Amoora rohituka*), Lampati (*Duabanga sonneratoides*), Simul (*Bombax ceiba*) etc (Das, 2000; Chaudhury, 2015). In areas adjoining the rivers Simul, Sirish (*Albizzia* sp.), Sissoo (*Dalbergia sissoo*) and Khair (*Acacia catechu*) are the most common species. The commonly found hill forest species are *Katus* (*Castenopsis indica*), Mandane (*Acrocarpus fraxinifolius*), Bhalukath (*Talauma hodgsoni*), Phalame (*Walsura tubulata*) associated with Kimbu (*Morus laevigata*), Panisaj (*Terminalia myriocarpa*), Gokul (*Ailanthus grandis*), etc. The savannah woodlands are also characterized by tropical trees of Kumbhi (*Careya arborea*), Tantari (*Dillenia pentagyna*), Jamun (*Syzygium cumini*), Palash (*Butea monosperma*) and Kul (*Zizyphus* sp.) (Indian Bird Conservation Network, 2015).

The faunal diversity of BTR includes 230 species of birds, 73 species of mammals, 37 species of reptiles, 32 species of fishes, 4 species of amphibians and 353 species of identified entomofauna. The main carnivores of BTR are Indian Tiger (*Panthera tigris*), Leopard (*Panthera pardus*), Clouded Leopard (*Neofelis nebulosa*), Hog Badger (*Arctonyx collaris*), Jungle Cat (*Felis chaus*), Leopard Cat (*Felis bengalensis*), Sloth Bear (*Melursus ursinus*), Fishing Cat (*Felis viverrina*), Civet Cat (*Viverricula indica*), Hyaena (*Hyaena hyaena*), Jackal (*Canis aureus*), Wolf (*Canis lupus*), Mongoose (*Herpestes edwardsii*), Fox (*Vulpes bengalensis*), etc. The predominant herbivores of the reserve are Elephant (*Elephas maximus*), Gaur (*Bos gaurus*), Sambar (*Cervus unicolor*), Chital (*Axis axis*), Barking Deer (*Muntiacus muntjak*), Hog Deer (*Axis porcinus*), Wild Pig (*Sus scrofa cristatus*), Hispid Hare (*Caprolagus hispidus*), Giant Squirrels (*Ratufa indica*, *R. bicolor*), and Pangolins (*Manis crassicaudata*, *M. pentadactyla*). Endemic Indo-Malayan species such as Clouded Leopard, Chinese Pangolin, Reticulated Python (*Python reticulatus*), and Black-necked Crane (*Grus nigricolli*) have been
reported in BTR (Buxa Tiger Reserve, 2015; Chaudhury, 2015). Buxa Tiger Reserve was one of the first reserves in the country to adapt census or enumeration of Tigers and co predators through scat DNA technique. The process started in 2007 (Buxa Tiger Reserve, 2015).

Buxa Tiger reserve is also enriched with butterfly diversity. Common Crow, Chocolate Albatross, Common Gull, Grass Yellow, Lemon Emigrant, Paris Peacock, Common Bluebottle, Common Beak, Lesser Zebra are some of the examples of butterfly species found here (figure 2).

Among reptiles, tortoise, lizards, various kinds of Snakes such as King Cobra, Russel’s viper, Black Krait, Banded Krait, Indian Python (Python molurus) and Reticulated Python (Python reticulatus), Chinese pangolin are found in this region. Gharial (Gavialis gangeticus) and Mugger (Crocodilus palustris) are reported in 6th Working Plan of Buxa Division (1965-66 to 1974-75), but these are not seen now-a-days (Buxa Tiger Reserve, 2015; Chaudhury, 2015; Indian Bird Conservation Network, 2015).

Among the wetlands of BTR, Narathali is a significant one where 3 big shallow lakes harbour a good number of migratory ducks including Schedule-I species like whistling Teal as well as common Teal, Pintail, white eyed pochard, shoveller etc. The swift streams of Jayanti & Raidak harbour Mergansers. The migratory birds appear during the end of Monsoon and fly away before summer. The migratory birds include the beautiful Ibis Bill, Pretty Minivets, Yellow Crested Sultan Tits, Streaked Spider Hunter which sucks nectar from simul flowers, Snipes, Wagtails, Leaf Warblers, Sandpipers. Endangered birds like Great pied Hornbill start nesting in Pukhuri area in Phaskhawa block of BTR during spring season (Chaudhury, 2015; Indian Bird Conservation Network, 2015; Sivakumar et al., 2006).

In BTR, the main non timber forest products utilized by the villagers are Mushrooms, Timboor, Teenphali, Lali fruits; Odal; Chilauni, Narkeli, Ritha, Malagiri, Amloki, Kainchipata, Broom sticks etc. Large number of the inhabitants is economically dependent on the NFTPs in BTR.

BTR forest with periphery of 330 km. is surrounded by numerous tea gardens and cultivated land of villages. Over the decades there have been large scale changes in the landscape outside the forests by way of intensive cultivation, growth of human habitations in villages and towns and in tea gardens (Buxa Tiger Reserve, 2015). Many of the tea gardens in these areas are important corridors of wildlife. The tea gardens and revenue villages situated on the periphery witness highest intensity of human wildlife conflict, especially of elephant attacks. Since, elephants have wide home ranges, typically between 100 and 1000 km²; a fragmented habitat or obstruction to traditional migration path is bound to bring human-elephant conflicts resulting in damage to agricultural crops, property, household and injury and mortality to both humans and elephants (Roy and Saha, 2012) (figure 3). Cultivated crops are easy source of forage for elephants which is nutritious and healthy too. Crop damage is positively correlated with migration patterns of elephants (Roy and Saha, 2012). In Buxa Tiger Reserve, elephants damaged 4.6% of the cultivated area during 2001 and 3.4% during 2002. The proportion of cultivated crops damaged by elephant in Buxa Tiger Reserve is more than double the proportion damaged by elephants in a southern Indian population (Asian Nature Conservation Foundation, 2015).

Implementation of joint forest management in BTR is an effective way to maintain the equilibrium of forest biodiversity and local economic growth. Forest Department in BTR provides employment opportunities to the people in various forestry works as Plantation Watchers, Fire Watchers, Eco Guides, Anti Depredation Helpers etc. Recently some initiatives were taken by the Eco-development committee of BTR for the socio-economic development of the forest inhabitants like training in Jute toy making, jute and cane bag making, local handloom and handicrafts, sewing training, jute and carpet making training and computer
training programmes. The various Eco-development activities and forest village development activities in Buxa Tiger Reserve Divisions are:-

a. Infrastructure development through construction and maintenance of road, culvert, and drinking water supply.

b. Imparting training on Jari, Weaving, Apiculture, Soft toy making, improved agriculture practices, improved cattle rearing, vermicompost, bag making, and training the Tourist Guides.

c. Rural electrification.

d. Distribution nursery for providing seeding to the local people and various institutions.

e. Construction of hut for forest villagers.

f. Distribution of furniture to schools.

3.2. Gorumara National Park (GNP)

Gorumara was a reserve forest since 1895. The park was declared a Wildlife Sanctuary in 1949, on account of its breeding population of Indian rhinoceros. It was declared an Indian National Park on January 31, 1994. Originally as small as 7 km², Gorumara has grown by incorporating neighbouring lands to about 80 km² (26.7564° N, 88.7975° E). It has 48 species of Carnivores & Herbivores, 193 species of Birds, 22 species of Reptiles and 27 species of fishes and wide diversity of invertebrates (figure 4 and 5) (Mondal, 2007). The flora includes Sal forests with common teak, rain tree (Shirish), and Bombax (also known as silk cotton tree or Shimul). The area is also rich in Bamboo groves, terai grassland vegetation, tropical riverine reeds and tropical orchids (Gorumara National Park, 2015).

This is the most important and crucial migratory corridor of the Asiatic Elephant (Elephas maximus) and is also the residence of the Great Indian one horned Rhinoceros (Rhinoceros unicornis) and herds of Gaur (Bos gaurus). Other fauna of the park include leopard (Panthera pardus), jungle cat (Felis chaus), leopard cat (Prionailurus bengalensis), fishing cat (Prionailurus viverrinus), monkeys (ex. Macaca mulatta), different species of deer, the small Indian civet (Viverricula indica), large India civet (Viverra zibetha), Malayan giant squirrel (Ratufa bicolor), wild pigs (Sus scrofa), turtles, pythons. The Park’s biodiversity is reflected in its wonderful avifauna comprising Hornbills, Hoopoe, woodpeckers, Green pigeons, Ibis, Crested serpent Eagle, nightjars, owls, Red Jungle Fowl and Peacock and many migratory birds as Brahminy duck, Whistling Teals (Mondal, 2007). The major conservation focus of the park is to maintain a viable breeding community of Indian rhinoceroses.

GNP lies in a very critical zone; it is densely populated by humans around its boundaries. Most of the wildlife conflicts in this area are related to leopard attacks. In between 2009 to 2016, 350 people were attacked by leopards (Kshettry et al., 2017). In most cases the attacks were defensive due to sudden confrontation. Leopards mainly prey upon the livestock (Kshettry et al., 2017; Bhattacharya et al., 2015) and that is the moment when they come in contact with the humans. Sometimes leopards also go inside the tea-estates which are around the periphery of the National park, where they come into direct encounter with tea garden workers (figure 6). Elephant conflicts are also common in this region, as all the National Parks and sanctuaries are interconnected with the corridors; hence elephant sometimes do tend to go inside the forest while moving in between these corridors (Bhattacharya et al., 2015; Kshettry et al., 2017). The conflict with elephants is mainly centered on the agricultural fields. The village people used to protect the crop fields from elephant attacks by burning woods in the night time and use crackers for the attacking elephants. Besides, Occasional attacks by Gaur and rhinoceros have also been recorded in this region (Bhattacharya et al., 2015).

3.3. Neora Valley National Park (NVNP)
Neora Valley is recognized as a global biodiversity hotspot for its unique ecosystem, where tropical, sub-tropical, temperate and sub-temperate forests represent a wealth of biodiversity (figure 7). The forest spreads over an area of 88 km² and is located between latitudes 26°52'03"N-27°7'35"N and longitudes 88°45'E-88°50'E. Neora Valley along with its adjoining forests of Kalimpong Forest Division is also an important ecological corridor in Eastern Himalayas for movement of long-ranging animals to and from other contiguous protected areas in North Bengal (Mallik, 2010). Four habitat types are recognized in NVNP, namely: i) Subtropical Mixed Broadleaf Forest; ii) Lower Temperate Evergreen Forest; iii) Upper Temperate Mixed Broadleaf Forest; and iv) Rhododendron Forest (Mallik, 2010).

The forest contains approximately 680 species of angiosperms, 276 species of insects, 38 species of other invertebrates, 308 species of birds and 33 species of mammals (Mallik, 2010). Approximately 20 % of the total species found in Neora Valley are extremely rare and many of those face the threats of extinction.

Neora Valley is enriched with Rhododendron diversity. Several species of Rhododendron like *Rhododendron arboreum*, *R. falconeri*, *R. barbatum*, *R. dalhousiae*, *R. grande*, *R. triflorum* etc. are found in the forest area. Other noticeable plant species are *Acer cambellii*, *Castanopsis indica*, *Michelia champaca*, *Abies densa* etc. The bryophyte diversity includes *Funaria sp.*, *Hookeria sp.*, *Asterella sp.* etc. High diversity of orchids are found among which species of *Acampe*, *Aerides*, *Dendrobium*, *Eria*, *Thunia* etc. are noticeable. (Das, 2010).

Among the medicinal plants found in the Neora Valley forest, Chinese Pepper (*Litsea Citrata*) is used as Antidepressant, antiseptic, Insecticide, helpful in heart diseases and bronchitis; Manjistha (*Rubia cordifolia*) is used to detoxify blood and to dissolve obstructions in blood flow; Herbaceous Woodlander (*Smilacina oleracea*) root extract is used for curing fractures; Chirayata (*Swertia chirata*) is used as drug for intermittent fevers, skin diseases and bronchial asthma; Indian snakeroot/Sarpagandha (*Rouwolfia serpentine*) is used as drug for high blood pressure and schizophrenia; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammatory, antiseptic and hypoglycaemic properties; Himalayan ginseng (*Panax pseudoginseng*) has antibacterial, antiinflammator
aulicus), King Cobra (Ophiophagus hannah), Indian Rat Snake (Ptyas mucosa) etc. are found in the Neora Valley forest area (Das, 2010).

The semi-evergreen forests between 1,600 m. and 2,700 m. of Neora Valley are home to several rare species of birds and are considered as one of the best places of bird watching. Among approximately 300 bird species found in Neora Valley, 7 are globally threatened and 2 are near threatened, 12 species belong to the Red Data Book list (Mallik, 2010). The Red Data Book enlisted species are Greater Spotted Eagle (Aquila clanga), Blue Fronted Robin (Cinclidum frontale), Broad-billed Warbler (Tickellia hodgsoni), Lesser Kestrel (Falco naumanni) etc. The other bird species include Black Eagle (Ictinaetus malayensis), Greenbacked Tit (Parus monticolous) (figure 8), Eurasian Tree Sparrow (Passer montanus), Ashy Wood Pigeon (Columbia pulchricollis), Hill Myna (Gracula religiosa), Goldcrest (Regulus regulus) etc. (Mallik, 2010; Das, 2010).

Neora Valley provides shelter and protection to various species of mammals included in Red Data Book of IUCN and appendices of CITES (Convention on International Trade in Endangered Species of wild flora and fauna). Red Panda (Ailurus fulgens), Gaur (Bos gaurus), Leopard (Panthera pardus), Tiger (Panthera tigris), Asiatich Black Bear (Ursus thibetanus), Red Fox (Vulpes vulpes), Barking Deer (Muntiacus muntjak), Himalayan Palm Civet (Paguma larvata), Marbled Cat (Pardofelis marmorata), Asiatich Wild Dog (Cuon alpines), Leopard cat (Prionailurus bengalensis horsfieldi), Indian pangolin (Manis crassicaudata), Chinese pangolin (Manis pentadactyla aurita), Malayan giant squirrel (Ratufa bicolour), Hodgson′s flying squirrel (Petaurista magnifica), wild boar (Sus scrofa cristatus) are significant mammals of Neora Valley.

Human wildlife conflict in the adjacent areas of NVNP is comparatively less than in the forests of Himalayan foothills. Occasional intrusions of Peacock and porcupine have been observed during the harvest season. Wild boars and rabbits destroy the agricultural fields in some fringe areas of NVNP. Leopard attack has decreased because of increase in population and development of tourism.

3.4. Senchel Wildlife Sanctuary (SWS)

Senchel Wildlife Sanctuary (26°59′50.05″N 88°15′49.73″E) (38.97 km²) was established in 1915 and is situated at a distance of 11 km from Darjeeling town of West Bengal, India. The area of the sanctuary is approximately 38.97 km². The area was declared a wildlife sanctuary vide notification No. 5380-F, dated 24th June, 1976 (Basu Roy, 2010). It is one of the five important Protected Areas of Darjeeling district. The two famous lakes of Senchal supply portable water to Darjeeling city (WWF, 2012).

The temperature during the cold season varies from 1.7 degree C and 8.4 degree C and during the hottest period, it varies between 14.4 degree C and 18.9 degree C. Frost is very common from December till March in areas above 2000m, in high ridges, snowfall can be experienced (ICIMOD, 2012).

Altitudinally, the sanctuary ranges between 1500 -2600 m. and broadly houses subtropical and temperate oak forests. Approximately 380-400 flowering plants can be found in Senchal Wildlife Sanctuary. The Sanctuary is home to various species of Rhododendron, Michelia, Oak, Pine and Birch (figure 9 and 10). A large number of Hydrangeas, Orchids, Daphne and Mahonia can also be found (Senchal Wildlife Sanctuary, 2014). The background vegetation is temperate broad-leaved forest with dominant species such as, Rhododendron arboreum, Rhododendron grande, Castanopsis hystrix, Ilex sikkimensis, Magnolia campbellii, Alcimandra cathcartii, Exbucklandia populnea, and Prunus cerasoides. Climbers and scramblers include Rubus paniculatus, Senecio diversifolius, Rubia manjith, Codonopsis viridis, and Edgaria darjeelingensis. The undershrubs and herbs are dominated by Aconogonum molle,
Cautleya lutea, Globba hookeri, Artemisia vulgaris, Urtica dioica, and Gerardiana heterophylla (ICIMOD, 2014). The major vegetation type is moist temperate forest, which supports many large mammals. The secondary grassland on Tiger Hill is home to innumerable sun-loving herbaceous plants. Being an area with very high humidity, almost all trees, including planted conifers, are covered with thick epiphytic vegetation, including Begonia gemipara, Agapetes serpens, Acer hookerii, Pilea ternifolia, Chamabainia cuspidata, and Hymenodictyon flaccidum. The sanctuary is also home to numerous medicinal plants such as Swertia chirayita, S. pedicillata, Panax pseudoginseng, Hypericum uralaum, and Vallerriana hardwickii (ICIMOD, 2014).

Wild pigs and barking deer are spread over Senchal wildlife sanctuary. Serow and goral occupy the untouched steep ridges and valleys while black bear belonging to Himalayas descend from higher altitudes and take rest during winter and autumn seasons. Leopard cat, jungle cat and leopard are seen in lower elevations of the forest. Apart from this Ant eater, flying squirrel, Indian civet, Assamese macaque and common Rhesus are also spotted here. The region of this sanctuary is very rich in bird life. Sunbirds, Babblers, Thrushes, Pigeons, Green, Imperial Pigeons, Hornbills, Fowl, Red jungle, Emerald Cuckoos, yellow necked wood pecker etc are spotted here (Senchal Wildlife Sanctuary, 2015)

The human wildlife conflict in this region is mainly due to Asiatic black bear (Ursus thibetanus) wild boar (Sus scrofa), Leopard (Panthera pardus), yellow throated marten (Martes flavigula) and golden jackal (Canis aureus) (Sunar 2012; Bhattacharya et al., 2015). The conflict arises when the animals enter into the agricultural fields or kill the livestock. There are few occasions when bears come into direct conflict with humans inside the forest areas, when the victims venture inside the forests for the collection of livestock fodder (Bhattacharya et al., 2015). Pig fencing was observed in the forest edge hamlets in SWS, which is specially made for protecting the crops from wild pigs. Recently goats are not been raised as livestock, as it causes leopard to intrude the villages.

**4. BIODIVERSITY MANAGEMENT PROPOSALS**

Several forest areas of the Eastern Himalayas have become the attractive tourist spots for pleasure trips, biological and geographical excursions and medical research works. In spite of getting so much attention in the recent times, there are considerable gaps in managing and conserving the forest resources and biodiversity. There is an urgent need for implementing sustainable management systems in these forest areas for conservation of biodiversity and traditional ecological knowledge.

A. There is lack of gross knowledge among villagers on the advantages of afforestation in the Hill areas. Specific training and awareness efforts from the Forest Department have to be undertaken to educate people on the drawbacks of deforestation and the long term effects it has on climate. In the silviculture unit, the plant varieties should be increased and more modern methods of conversation should be implemented associated with gene banks and extensive databases. Ecological restoration should be done by restoring the damaged, degraded and areas destructed by landslides. Focus should be given on the protected areas critically important to floral and faunal habitat, water catchments and areas important with social and cultural values.

B. Like any other protected areas in India, the forest areas of the Eastern Himalayas suffer from illegal cattle grazing, firewood collection, encroachment on the fringes and poaching. However, due to inaccessibility and difficult terrain, the biotic pressures are still not very acute. More intense survey works and management practices should be done for mitigating the anthropogenic threats.
C. Biopiracy is a major problem in Eastern Himalayas which can affect the endemic plant diversity in the areas. Neora valley national park and Senchal Wildlife Sanctuary are considered among the richest medicinal plant diversity zones of India. Initiatives should be taken for promoting medicinal resources and giving economic support to build up private nurseries where several varieties of important plant species can be preserved.

D. Local training centers should be established for teaching the local people about the importance of natural resources of the Eastern Himalayan ecosystems. In the silviculture units, the plant varieties should be increased and more modern methods of conversation should be implemented associated with gene banks and extensive databases.

E. The effects of climate change are more severe in the Himalayas compared to the other regions (IPCC, 2007). The annual and seasonal temperature trends in the Kanchenjunga landscape (figure 11) indicate an increase at the rate 0.01 – 0.015 °C/year, with higher altitudes experiencing greater warming (Singh et al., 2011). Darjeeling was the most vulnerable compared to Sikkim, eastern Nepal and western Bhutan. Extensive study is required on the effects of climate change on the Eastern Himalayan biodiversity, with special focus on Neora Valley National Park and Senchal Wildlife Sanctuary because of their richness in endemic species and medicinal plants.

F. Roads and infrastructure are development priorities that also pose inevitable threats to biodiversity and to the animal movement corridor outcomes in particular. Road networks and tourist inflow would enable easier access to the area but would also open the site to commercial development, which would hamper the ecology of the site. A number of PWD roads, including a National Highway, NH 31C, pass through the BTR. Consequently, wild animal death cases due to accidents have also increased. Railway and road construction in BTR area should be inspected thoroughly after proper study on the corridor networks and their management strategies (Chaudhury, 2015).

G. Over the years, the incidences of cattle grazing in the villages of BTR have exponentially multiplied. A study placed the number of cattle grazing in the forest every day at about 150,000 cattle graze in the forest every day. Excluding some blanks and steep slopes, the intensity of grazing is 2.5 cattle per ha. The number of households increased by about 66% from 1970 to 1999 (Joint Forest Management, 2015). With the increase in households, cattle numbers have also increased rapidly. Reduction in cattle grazing in the forest areas can increase the soil stability, can reduce erosion and can balance the ecosystems. However, a management strategy, like rotational grazing of livestock, might be an alternative instead of sticking to the strategy of reduction of cattle and curtailing villager’s rights over forests especially within the protected areas.

5. ACKNOWLEDGEMENTS

The authors acknowledge the villagers and the workers in the local forest department offices for their cooperation and support.
All the photographic documentation is done by the author (Dr. Sayan Bhattacharya). Nikon D7000 Digital SLR with Nikkor 18-105 mm. VR lens and Nikkor 55-300 mm. VR Lens were used for capturing the images. All rights reserved.

Figure 1: Buxa Tiger Reserve.

Figure 2: Chocolate Albatross, Lemon Emigrant in BTR.

Figure 3: Elephant watch tower in BTR.

Figure 4: Common Crow in GNP.

Figure 5: Dragonfly in GNP.

Figure 6: Tea garden beside GNP.
Figure 7: NVNP forest with pines and epiphytes.  
Figure 8: Green backed tit in NVNP.  
Figure 9: Pine forest in SWS.  
Figure 10: Kanchenjunga Mountain from SWS. 
Figure 11: Kanchenjunga Landscape with protected areas and proposed corridors.

6. REFERENCES

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WWF., 2012. *Status and Distribution of Asiatic Black Bear and the Status of Human-Bear Conflict at Senchal Wildlife Sanctuary Darjeeling, West Bengal, India*. WWF-India and West Bengal Forest Department, Wildlife Division I.
ABSTRACT
Emergently, environmental considerations and embodied carbon appraisal for heritage buildings repair have become increasingly important. The purpose of this paper is to present a decision-making process based on ‘Green Maintenance’ model—an appraisal approach based on life cycle assessment (LCA) of repair for heritage buildings with an insight upon low carbon materials considerations. The paper also demonstrates on how the model could be understood as a carbon LCA and recognised in reducing carbon emissions for laterite stones repair based on a case study of Bastion Middleburg, Melaka, Malaysia. Adopted calculation procedures of LCA were enabled an evaluation of embodied carbon expenditure from laterite stones repair of the bastion. The results show that reconstruction has the highest embodied carbon expenditure of all laterite stones repairs scenarios and techniques. Comparatively, repeated repointing had the lowest embodied carbon expenditure with approximately 86% and 75% lower than reconstruction and stone replacement technique respectively. However, when this is placed in the context of a 100-year maintenance period and philosophical principle of minimal intervention, the stone replacement had the lowest Environmental Maintenance Impact (EMI). Meanwhile, it was also found that transportation contributes to approximately 50% impact on EMI for all laterite stones repair techniques. Significantly, results also indicated that the importance of considering EMI for different repair techniques over the life cycle of heritage buildings, rather than just considering building conservation philosophy, societal and economic factors for repair purposes.

Keywords: Embodied carbon appraisal; Environmental Maintenance Impact (EMI); Green Maintenance; heritage buildings; life cycle assessment

1. INTRODUCTION
This section reviews maintenance of heritage buildings from environmental perspective by giving insight into ‘Green Maintenance’ influences on the repair options for the laterite stones.

1.1 Heritage Buildings Maintenance from Environmental Perspective
Maintenance of heritage buildings is not only undertaken from societal and economic domain, but also from environmental perspective as it has greater impact, due to the usage of traditional materials for their repair. Emergently, maintenance has been recognised as a carbon commitment. For instance, UK construction industry consumes over 420 Mt of materials, 8Mt of oil and releases over 29 Mt of carbon dioxide annually (Hammond and Jones, 2011). Comparatively, Malaysian construction industry emitted 3 Mt CO₂, 10th highest emitters in the country (Othman and Jafari, 2013). Nowadays, there is trend of
achieving low carbon and conspicuous consumers upon carbon emission. Increasingly, there is important pledge and prime concern on sustainable repair of heritage buildings through reduction CO\textsubscript{2} emissions, particularly based on life cycle assessment (LCA) approaches (Kayan, 2015).

Previously, there are several LCA studies in the public realm had specifically investigated the carbon impacts and emissions in the forms of embodied carbon coefficient (kgCO\textsubscript{2}/kg) particularly on stone materials (Table 1). In 2010, ‘Embodied Carbon in Natural Building Stone in Scotland’ concerted research project by Historic Scotland and Scottish Institute of Sustainable Technology (SISTech) of Heriot-Watt University had attempted to understand the carbon embodied in natural stones used in the construction and repair of Scotland’s buildings, using Sima Pro and Gabi4 (SISTech, 2010; Crishna et al., 2011).

![Table1 Previous LCA studies on stone materials](image)

Source: Adopted from Kayan, 2013.

### 1.2 Green Maintenance: Conceptual Overview

Representations of embodied carbon (CO\textsubscript{2} emission) for each maintenance intervention (in y-axis) of the model are shown in Figure 1. Whilst, each maintenance intervention (repair) is characterised by its longevity (l) (denoted by the saw-tooth profile) and embodied carbon (Ce) (denoted by the stepped dotted lines). It must be also emphasise that every repair type has differences in term of durability due to unpredictable of Estimated Service Life (ESL) and longevity of repair.

![Figure 1](image)
Source: Forster, et al., 2011.

Practically, maintenance interventions that intersect with environmental, societal and economic factors would potentially be considered as being the most sustainable maintenance i.e. ‘Green Maintenance’. Forster et al., (2011) had practically applied mathematical modelling and reflects upon the meaningful determination of the carbon cost associated with repair interventions. The expansion of Forster et al’s (2011) work expanded into Green Maintenance which was developed from mid-stage doctoral research undertaken by Kayan (2013). It must be noted that, this paper is a logical and meaningful continuation of Kayan’s (2013) doctoral research and practically applies the established theory, focusing on laterite stones repair of heritage buildings.

1.3 Laterite Stones Repair Relationship with Embodied Carbon Expenditure

Five repair techniques for laterite stones evaluated in this paper and their respective association with embodied carbon expenditure were discussed further in the following section.

1.3.1 Reconstruction

Reconstruction techniques were normally undertaken to repair damaged or collapsed stone structure with suitable matched stone with mortar jointing, use either a newly quarried or salvaged stone. Significantly, embodied carbon expenditure of this technique is consistently high due to quarrying, manufacturing and transportation of newly quarried or salvaged stone. This technique possibly lasts about 100 years life expectancy as likely similar with stone replacement. Therefore, one (1) time of its EMI was attributed to the hundred-year arbitrary period (Kayan 2013; 2015).

1.3.2 Stone Replacement

Stone replacement is undertaken using a newly quarried or salvaged stone. It can be considered as very durable when a suitable matched stone is used. It replaces the defective stone and is assumed to be cutting back of approximately 100mm of the decayed materials and building in a new section of stone. Basically, this technique also requires secondary fixing material to attach or tie the stone and secure backing material together. Thus, the embodied carbon expenditure of this technique may be high due to its quarry extraction, manufacturing and transportation. This techniques possibly lasts about 100 years life (1 time of its EMI was attributed to the hundred-year arbitrary period) (Kayan, 2013 and 2015).

1.3.3 Repeated Repointing

This technique used to repair the loose, open, soft, crumbly and washed-out bedding and jointing mortar in stone. The repair is basically done by cutting out the deteriorated mortar from the wall surface up to the remaining sound mortar depth of the wall, which commonly is about 2 or 3 times the thickness of the original mortar joints. After that, the deep joints will be filled with a lime mortar before later being pointed and flushed in a separate operation. This technique has less embodied carbon expenditure compared to stone replacement. However, the repair is only stands and lasts up to 25 years (4.0 times of its EMI was attributed to the hundred-year arbitrary period) (Kayan, 2013 and 2015).

1.3.4 Repeated Plastic Repair

It is called as plastic repair as the plastic term is refer to the plasticity of the repair materials. It requires cutting back of deteriorated stone until a sound surface is achieved and the lime-based mortars are used in order to resurface the stone. This technique also helps in reducing the embodied carbon expenditure as the repair materials such as sand can be locally obtained. The
longevity of this type of repair is up to 30 years (3.33 times in the hundred-year arbitrary period) (Forster et al., 2011; Kayan, 2013 and 2015).

1.3.5 Plastic Repair, Followed by Stone Replacement
The technique requires cutting back the defective stone until a sound surface is achieved. Lime-based mortars of the same proportion are used in order to resurface the stone (Kayan, 2013 and 2015). Normally, it was reapplied every thirty years (3.33 times in the hundred-year arbitrary period) (Kayan, 2013 and 2015). The ‘cutting out’ is done on defective masonry to a depth of approximately 100mm and the building in of a new section of stone. It is quite common that replacement stone will last beyond the hundred years and therefore only 0.7 of its EMI was attributed to the selected 100 years arbitrary period (Kayan, 2013 and 2015).

In practice, reconstruction and stone replacement would be commonly undertaken individually, while a plastic repair is commonly followed by natural stone replacement. By contrast, it would be highly unusual to replace the stone and then undertake a plastic repair (Foster et al., 2011 and Kayan, 2013). In addition, other techniques are commonly utilised by practitioners, however they are outside the scope of this paper.

2. METHODS
This section explains rationale and primary components for Green Maintenance and LCA approach.

2.1 Green Maintenance Modelling
LCA parameters are influenced by many variables, such as; longevity of repair, resourcing and geographical site, and mode of transportation, degree of wall exposure, building and wall detailing, quality of initial work and specification and etc. Twinned with LCA, Green Maintenance in this paper occurs as carbon accounting. The model is prevalent within selected LCA boundaries.

2.2 Selected ‘Cradle-to-Site’ Boundary Life Cycle Assessment
Selected boundary for this work were determined using LCA requirements as specified in 2006 of ISO 14040, in accordance with Building Research Establishment (BRE) of UK, Methodology for Environmental Profiles of Construction Materials, Components and Buildings (Howard et al., 1999) as well as consistent with the Business-to-Business (B2B) approach outlined in PAS 2050 (British Standard Institution, 2008). It broadly took into consideration life cycle of used repair materials of a selected case study, starting from quarrying, mining, manufacturing and processing, to eventual transportation to building site.

2.3 Embodied Carbon Coefficients (kgCO₂e/kg)
Embodied Carbon Coefficients (kgCO₂e/kg) of each materials used in laterite stones repair of the case study were derived from Inventory of Carbon and Energy (ICE) by University of Bath and SISTech (Table 2). They were utilised to calculate the embodied carbon expenditure for each selected repair technique within cradle-to-gate of LCA. It must be emphasised that these materials experienced variations in their specific type as they were based on industry-generated average figures.

Table 2 Embodied Carbon Coefficients (kgCO₂e/kg) of materials used in Bastion Middelburg repair

<table>
<thead>
<tr>
<th>Materials</th>
<th>Embodied Carbon Coefficient (kgCO₂e/kg)</th>
</tr>
</thead>
</table>

254
Laterite stone 0.781
Lime mortar materials 0.017 (a) Limestone 0.005 (b) Sand 0.450 (c) White cement

Source: Hammond and Jones, 2011.

2.4 Transportation Data
Table 3 shows materials used in repair of the Bastion Middelburg with their respective resourcing locations and distances to building site (the bastion). It must emphasised that the transportation distance from the secondary resourcing location, such as a warehouse, port, airport or other point of procurement, either from supplier or manufacturer, were not considered for the calculation of embodied carbon expenditure (CO$_2$ emissions within gate to site boundaries) of LCA for this paper.

<table>
<thead>
<tr>
<th>Materials</th>
<th>Resourcing Location</th>
<th>Distance to Building Site (km)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laterite stone</td>
<td>Prachinburi, Thailand</td>
<td>1,797.0km</td>
<td>Imported</td>
</tr>
<tr>
<td>Limestone</td>
<td>Kuari ISB Sdn. Bhd., Alor Gajah, Melaka, Malaysia</td>
<td>46.1km</td>
<td>Locally sourced</td>
</tr>
<tr>
<td>Sand</td>
<td>Bukit Senggeh, Selandar, Melaka, Malaysia</td>
<td>37.7km</td>
<td></td>
</tr>
<tr>
<td>White cement</td>
<td>Tan Soon Hin Trading Sdn. Bhd., Klebang Besar, Melaka, Malaysia</td>
<td>7.9km</td>
<td></td>
</tr>
</tbody>
</table>

Source: Adopted from Azizul, 2015.

2.5 CO$_2$ Emission Factors (kgCO$_2$/kg/km)
In this paper CO$_2$ emissions factors per tonne km for HGVs’ road freight UK average in 2008, along with HGVs loads in 2005 was used to calculate embodied carbon expenditures within gate-to-site (IFEU, 2008; Defra/DECC, 2009). This functional units value was multiplied by the mass (kg) of materials transported with their respective transportation distance. Embodied carbon expenditure for laterite stones repair materials transportation within gate-to-site was calculated based on $1.32 \times 10^{-4}$ kgCO$_2$ per kg km.

2.6 Functional Units of Embodied Carbon Per m$^2$ (tCO$_2$/t/m$^2$)
Per kilogram of data of laterite stones repair materials could arise from different methods and this might influencing the characterisation of functional units used in this paper. In this paper, total embodied carbon per m$^2$ (tCO$_2$/t/m$^2$) expended from quarrying, manufacturing and transportation of repair materials for laterite stones to buildings site within cradle-to-site was calculated for each repair type.

2.7 Total Embodied Carbon Expenditure for Selected Maintenance Period within Cradle-to-Site
With inclusion of transportation data (emission factor and distance), total embodied carbon (tCO$_2$/t) expended within cradle-to-site could be calculated using Equation (1) (Kayan, 2013).
2.8 Frequency of Laterite Stones Wall Repair Intervention in Every Arbitrary Year

In order to test the efficacy of model, the longevity of laterite stones repair within arbitrary periods (in this paper 100 years) is chosen. Longevity of laterite stones repair will be the function of number of frequency of repair for each selected arbitrary periods (years), which can be express in Equation (2) (Author, 2017).

\[ f_x = \frac{x_{\text{years}}}{i} \]  

Where;
- \( i \) = interval years of laterite stones repair;
- \( x_{\text{years}} \) = arbitrary maintenance intervention arbitrary period; and
- \( f_x \) = frequency of specific laterite stones repair (longevity of repair) within maintenance arbitrary period.

In this paper, emphasise should be mad on longevity of repair for laterite stones repair techniques and scenarios as this is fundamental requirement for the assessment of total EMI.

2.9 Environmental Maintenance Impact (EMI)

Comparative Embodied Carbon Expenditure determined on EMI could then be calculated for each of these repairs techniques and scenarios within the selected boundary of LCA as in Equation (3) (Kayan, 2016).

\[ \sum EMI = \sum ECE_{\text{cradle-to-site}} \times f_x \]  

Where;
- \( f_x \) = frequency of specific laterite stones repair (longevity of repair) within maintenance arbitrary period; and
- \( \sum EMI \) = comparative EMI (tCO₂e/tm²) for laterite stones repair within the arbitrary maintenance periods, within ‘gate-to-site’ LCA boundary.

It must be noted that, the calculation of embodied carbon expenditure could only be accurate if all the repairs are carried out immediately after the life expectancy of the material used in each repair on case study building has concluded (Forster et al., 2011; 2013 and Kayan 2013; 2015).

2.10 Case Study: Bastion Middelburg, Melaka, Malaysia

Bastion Middelburg (Figure 2) is located at Melaka World UNESCO Heritage Site. Built in 1641 by the Dutch, it was designated as Melaka Fort, using rich of iron and alumina materials of laterite stones (JWN, 2010). This bastion had consistently facing difficulties in finding the locally available of original laterite stones and continuously had weathering effects of tropical
climate. For the purpose of this paper, initial serviceability conditions and major refurbishments of the bastion were not considered for calculation in this paper.

![Figure 2 Bastion Middelburg, Melaka, Malaysia](image1)


### 2.11 Repair Materials Profiles

Profiles of materials that are being used in the Bastion Middelburg repair are explained in this following section:

#### 2.11.1 Laterite Stones

Laterite stones of the bastion are ferruginous deposits of vesicular structures (Figure 3). Characteristically, the deposit is soft such; it can be cut using a spade, to be made into regular blocks when in freshly state. After has been cut (in block), it rapidly hardens and highly resistant to weathering, once it is exposed to the air and sun (Pendleton, 1952).

![Figure 3 Laterite stone block of Bastion Middelburg, Melaka, Malaysia](image2)


Table 4 shows laterite stone blocks profiles used in Bastion Middelburg repair which were procured from quarry in Prachinburi in Thailand. In this bastion, Prachinburis’ laterite stones has been recut or resized, mainly to reconstruct the bastion’s wall edges, turrets, nosing and parapet and etc.

<table>
<thead>
<tr>
<th>Type of Stone</th>
<th>Laterite stones</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Wall Surface Area (m²)</td>
<td>2,666.67 m²</td>
</tr>
<tr>
<td>No. of stone blocks used</td>
<td>16,000</td>
</tr>
<tr>
<td>Size of Stone (mm/block)</td>
<td>558mm x 355mm x 228mm</td>
</tr>
<tr>
<td>Mass of Stone (t/block)</td>
<td>±0.1 t/block</td>
</tr>
<tr>
<td>Total mass (t) of stone blocks used</td>
<td>1.6 t</td>
</tr>
</tbody>
</table>

Source: Adopted from Azizul, 2015.
2.11.2 *Lime Mortar Materials*

Lime mortar materials being used for the Bastion Middelburg repair is based on the proportion of 1:1:3 of limestones, sand and white cement respectively (JWN, 2010; Azizul, 2015). Prior to repair, analysis on lime mortar profiles was undertaken to determine the composition, mixture and resourcing location, using several samples of the existing pointing of the bastion.

### 3. RESULTS AND DISCUSSION

The results of this research were discussed in the following section:

#### 3.1 Mass (t) of Repair Materials

Table 5 shows that the mass (tonnes) of material used for its reconstruction and stone replacement is commonly determined by mass (t), dimension of stone blocks and the lime mortar jointing materials ratio. Repeated repointing materials mass were influenced by pointing thickness and depth of the wall. In repeated plastic repair is dependent upon minimum depth undercut or cutback, base coats and multi-layer patch finishes thickness. For plastic repair, followed by stone replacement, it is contributed by specification of materials of used and proportion of limestones (1): sand (1): white cement (3) (JWN, 2010; Azizul, 2015). In this paper, the mass (kg) of lime mortar jointing materials are: 80.4 kg, 80.4 kg, 241.2 kg for reconstruction and 87.2 kg, 7.2 kg, 21.6 kg for both stone replacement and plastic repair, followed by stone replacement. In repeated repointing, lime mortar pointing materials is 7.2 kg, 7.2 kg and 21.6 respectively. In both repeated repointing and plastic repair, followed by stone replacement, 5.6 kg of limestones, 5.6 kg sand and 16.8 kg of white cement were used as lime mortar plaster materials (Azizul, 2015).

<table>
<thead>
<tr>
<th>Repair Techniques and Scenarios</th>
<th>Per 1 m²</th>
<th>Total Mass (t)</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Reconstruction</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a Laterite stone block</td>
<td>0.6</td>
<td>1.6</td>
<td></td>
</tr>
<tr>
<td>b Lime mortar jointing materials</td>
<td>0.4</td>
<td>1072.0</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1.0</td>
<td>2,672.0</td>
<td></td>
</tr>
<tr>
<td><strong>2. Stone replacement</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a Laterite stone block</td>
<td>0.6</td>
<td>1600.0</td>
<td></td>
</tr>
<tr>
<td>b Lime mortar jointing materials</td>
<td>0.04</td>
<td>96.0</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>0.64</td>
<td>1,696.0</td>
<td></td>
</tr>
<tr>
<td><strong>3. Repeated repointing</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lime mortar pointing materials</td>
<td>0.04</td>
<td>96.0</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>0.04</td>
<td>96.0</td>
<td></td>
</tr>
<tr>
<td><strong>4. Repeated plastic repair</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lime mortar plaster materials</td>
<td>0.03</td>
<td>74.7</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>0.03</td>
<td>74.7</td>
<td></td>
</tr>
<tr>
<td><strong>5. Plastic repair, followed by stone replacement</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a Lime mortar plaster materials</td>
<td>0.03</td>
<td>74.7</td>
<td></td>
</tr>
<tr>
<td>b Laterite stone block</td>
<td>0.6</td>
<td>1600.0</td>
<td></td>
</tr>
<tr>
<td>c Lime mortar jointing materials</td>
<td>0.04</td>
<td>96.0</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>0.67</td>
<td>1,770.7</td>
<td></td>
</tr>
</tbody>
</table>


#### 3.2 Functional Units of Embodied Carbon Per m² (tCO₂e/kg/m²)

Figure 4 establishes embodied carbon expenditure, undertaken 1 m² of laterite stone structures.
3.3 Testing of Green Maintenance Model

The testing of Green Maintenance model of this paper was represented based on comparative total embodied carbon expenditure, generated in the form of EMI. Figure 5 represents the total EMI expended in five different repair techniques and scenarios for laterite stones of Bastion Middelburg. Total EMI generated in this table is based on total wall surface area of the bastion (2,666.67m²), multiply with value of Functional Units of Embodied Carbon Per m² (tCO₂e/t/m²). The typical results within 100 years period show that reconstruction has the highest value of EMI, 1,926.32 tCO₂e/t. Comparatively, EMI for stone replacement was slightly lower, 1,655.7 tCO₂e/t. Meanwhile, EMI for repeated repointing, repeated plastic repairs and repeated plastic repair, followed by stone replacement is 425. 9 tCO₂e/t, 256.2 tCO₂e/t and 1,239.0 tCO₂e/t respectively. It must emphasised that, EMI in this research is mainly influenced by longevity of repair and life expectancy of repair materials used in laterite stones (BCIS, 2006 and BRE, 2016). Additionally, average life expectancy of 100 years of stone repair does not take account of a well-maintained building and there are many examples of laterite stone still functioning satisfactorily in buildings that are several hundred years old.

Figure 4 Embodied Carbon Per m² (tCO₂e/t/m²) for Bastion Middelburg repair

Results in Figure 5 are an evident that stone replacement has the highest embodied carbon expenditure of all the interventions. However, when this is placed in context of a 100-year maintenance period, it has the lowest EMI due to the short life expectancy of the other interventions. The results also revealed that repeated repointing contributed to nearly 86% and 75% lower total EMI than reconstruction and stone replacement respectively. Despite the lower EMI for repeated repointing, the whole surface of the bastion is essentially required overall surface repointing works within the same period. Therefore, EMI for repointing could be higher than reconstruction and stone replacement. Conversely, the stone replacement is commonly undertaken on small surface areas (based on quantity block of stone), implicates consistently low EMI as compared to the reconstruction and repeated repointing. This research also shows that transportation accounts to maximum of 50% of total EMI.

4. CONCLUSION

This paper shows that the Green Maintenance model has ability to evaluate different repair techniques and scenarios for heritage buildings based on appraisal on embodied carbon expenditure. The model indicates that, the more frequent repair (lowest longevity of repair such as repeated repointing and repeated plastic repair), the higher their overall total of EMI (higher CO₂ emissions) within cradle-to-site of LCA, as equated in selected time frame. Conversely, the minimal intervention of laterite stone replacement is the best options with the lowest CO₂ emissions within selected time frame, which highly influenced by the highest longevity of repair. Significantly, the model had shown its ability to evaluate the efficiency of laterite stones repair in terms of EMI i.e. CO₂ emission and eventually towards low carbon impact of heritage buildings.

5. ACKNOWLEDGEMENT

The authors would like to thank Ministry of Education, Malaysia (MOE) for funding this research under Fundamental Research Grant Scheme (FRGS) (Project No: FP005-2014A) and Miss Nur Dania Azira Binti Azizul, for access to maintenance and repair data of the case study.

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FABRICATION AND EVALUATION OF GRAPHENE IN THREE-LEAD SYSTEM

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ABSTRACT

Because of its outstanding physical and chemical properties, graphene is widely used in different materials applications today. The electrical properties of this carbon allotrope have led us on how to functionalize this material to medical electrodes that can record the electrical activity of the heart. Furthermore, different quantities of graphene such as its quality, size, and shape would yield different effects on the signal quality. Through the process of graphite exfoliation, graphene was extracted from polyethylene vinyl-acetate (EVA) that acts as a substrate. The samples were analysed through a set of material’s characterization that shows the presence of carbon material, ensued by its material integration as medical electrodes with a transducer gel. Following the three-lead electrocardiogram (ECG) system, the electrodes were then compared by the following factors: \( V_{rms} \) difference for signal amplification, signal-to-noise ratio (SNR) for sensitivity, and peak time interval for signal verification. \( V_{rms} \) difference results for commercial graphene electrodes show that amplification has occurred on the P wave, while the T and R waves have been dependent on the position of the conductors. Increased sensitivity was exhibited for all the ECG waves as indicated by the commercial graphene’s SNR values at 21.837 dB for P waves, 21.824 dB for R waves, and 20.902 dB for T waves. Considering their SNR values, the size and shape of graphene has barely affected the performance of the data acquisition. Despite these promising results, fabrication of graphene as electrodes still has room for improvement.

Keywords: ECG; Graphene; Peak Time Interval; SNR; \( V_{rms} \) Difference

1. INTRODUCTION

Cardiovascular disease has been one of the major causes of death worldwide. Here in the Philippines, cardiovascular ailments have been the highest mortality rate, and cardiac fibrillation is among the most communal heart conditions. Furthermore, this malady is exhibiting rapid growth rates regarding new patients which are being analysed every year: 460,000/year in USA, and more than 4 million/year around the world. (World Health Organization, 2014) Previous checking of heart condition uses the Holter Monitor System where five (5) electrodes were directly patched to one’s body and connected to a tape recorder through wires. (Hyejung, Yazicioglu, Merken, & Van Hoof, 2010) Having Ag-AgCl as the primary conductor, this medical component has been made possible in recording such an activity. Modification of this was done throughout the years, and one instance of this is the manufacturing of a non-woven and non-adhesive electrode by the researchers, where they named it as Textrodes (Calalan & Go, 2011).

Graphene is a carbon allotrope that contains promising opportunities, in which it has already been under different researches. It is found out that this material exemplifies in different properties such as mechanical, chemical and electrical (Bunch, 2008). This research just shows that the allotrope is
so much more to discover, and it is being looked forward to conduct many studies that would relate to medicine as part of the researcher’s field.

A comparative study was made to determine the effect of graphene in the electrical performance of the electrodes. These parameters can be listed as: (1) material’s composition, (2) size and (3) shape. These are the elements that would be varied in optimizing the SNR performance of the electrodes. In finding an alternative material applicable to people, this research has the potential to find its own way as an essential national resource of development. Graphene is one possible material that possesses superb physical quality that motivates us to pursue this kind of research. It has been used in different applications, and in this study, it was used for medical diagnostic tool.

![Figure 1. The Three-Lead System is composed of electrodes that are only attached on the chest.](image)

The more electrodes attached to the body, the more accurate and precise the reading of the ECG is expected. This is true for the conventional lead system where it uses 12 electrodes to be attached not only in the chest cavity, but also in the lateral side surrounding the heart. However, this research will not be able to form this kind of lead system due to lack of resources. Instead, the study utilizes the three-lead system shown in Figure 1.

2. MATERIALS AND METHODS

2.1. Fabrication of Graphene on Electrodes
Through the widely-known process of exfoliation, graphene can be easily fabricated from graphite. However, it was expected that this will not be as pristine as the one made by Chemical Vapor Deposition (CVD) technique. Exfoliation has been the most well sought protocol due to its simple and cost-effective approach in fabricating graphene. Using a laminating film composed of ethylene-vinyl acetate (EVA) polymer, the contents of an activated carbon were spread throughout the film. This was followed by heat lamination for uniform distribution of the carbon material on the substrate. The two sides of the film that were adhered in the mentioned process was forcibly opened, leading to the samples which were to be cut in different sizes (3, 4 & 5 cm) and shapes (Triangular, Square & Circular); these parameters were acquired from the study made by Forrester & Petrofsky (2004) which assessed the effect of size and shape on pain simulation.

Compositional electrodes on the other hand consist of graphene from a commercial product and the exfoliation procedure. The process of applying the commercial graphene did not need the laminating procedures mentioned; instead, it was directly placed to the substrate. Each sample was continuously spread using a tissue, until there were no more graphite or
unwanted particles that would stick on the paper. The samples were attached to the medical electrodes by putting holes enough for the size of the cap as shown in Figure 2. The attachment was secured by applying same amount of transducer gel to all the electrodes.

Figure 2. The graphene samples labelled and attached in the medical electrodes.

2.2. Evaluation of Graphene on Electrodes

Table 1. The specific peaks of graphene and their values from Raman Spectroscopy.

<table>
<thead>
<tr>
<th>Peaks</th>
<th>Raman Shift (cm(^{-1}))</th>
</tr>
</thead>
<tbody>
<tr>
<td>G-peak</td>
<td>~1583</td>
</tr>
<tr>
<td>D-peak</td>
<td>~1620</td>
</tr>
<tr>
<td>2D-peak</td>
<td>~2720</td>
</tr>
</tbody>
</table>

To verify the presence of Graphene from exfoliation, each sample was analysed by Raman Spectroscopy provided by the National Institute of Physics (NIP), Quezon City, Manila. This kind of spectroscopy is one of the main methods that can verify this allotrope through its characteristic Raman peaks shown in Table 1. (Andrei, Li, & Du, 2012) Since a miniscule portion of a surface is spotted by the spectroscopy, the lightest portion of the sample was considered. Any alteration from these standard values can be due to more impurities found on the sample. The peaks of the samples were compared to the ones of a pure graphene made from Chemical Vapor Deposition (CVD).

Figure 3. ECG peaks recorded from the LoggerPro software.

Using the LoggerPro software which allows to view the signal (Vrms) and its corresponding time, each peak recorded from the electrodes was analysed, namely the P, R, and T waves.
(Refer to Figure 3) To minimize the error from this experiment, the electrodes were in turn exchanged for the data acquisition. On the first trial, those sets of electrodes were altogether placed on the body for the simulation. However, the peaks and intervals of the waves under a certain parameter were not matched. Another factor that contributes to the error is the less accuracy of the signal produced due to the distance of the electrodes to the specific areas that produce the electrical simulation. With this, two electrodes were instead probed, taking turns for the unplaced electrode. Together with the conventional electrodes that use Ag-AgCl as their conductor, graphene-based electrodes were compared in terms of different factors:

2.2.1. Vrms Difference of the Electrodes
To determine if the signal coming from graphene electrodes has amplified, the Vrms of these were subtracted by the values of the conventional electrodes. Now that I obtained commercial graphene, the process was done by subtracting the Vrms of the electrodes from the experimental conductors. Positive differences are in favour of the amplification from the higher quality of graphene, the larger size of electrode, and greater sides of the shape.

2.2.2. SNR of the Electrodes
The Signal-To-Noise ratio (SNR) is a factor that indicates the sensitivity of the electrodes. (Poole, 2017) Positive results favour the better signal coming from the desired electrode, while negative data can be due to noise coming from different factors, such as the simultaneous data acquisition from another electrode. SNR in decibel (dB) was computed using the formula:

\[
\text{SNR (dB)} = \left| \frac{\text{VDE}}{\text{VNE}} \right|
\]

(Equation 1)

where: VDE = Vrms of desired electrode
VNE = Vrms of neighbouring electrode

The upper portion of the fraction always aims on the better quality, larger size, and greater side number of the sample.

2.2.3. Peak Interval of the Electrodes
It is significant to determine the simultaneity of the electrodes since they altogether gathered the signal coming from the heart. By getting the difference of the time a specific peak was gathered, the peak time intervals of P, R, and T waves were obtained for the two kinds of electrodes.

3. RESULTS AND DISCUSSION
Basing it from Figure 4, the graphene made in the experiment correlates with the one that was grown in CVD from the laboratory, in which its spectra serve as the standard spectra despite the deflection from the stray light. However, noticeable differences can be pointed out which can course the goal of locating graphene on the sample. When viewed under spectroscopy, Graphite is characterized to have G-band as the highest peak of all the peaks. (Childres, Jauregui, Park, Cao, & Chen, 2013) Conversely, graphene exhibits a considerable value of 2D band, as this was exhibited by the multilayer graphene and the sample from CVD. This 2D peak can decrease due to doping of certain impurities. In the case of my samples, it is possible that despite the lessening of carbon in the surface, there are still graphite particles which contribute to the decrease of the peak. As shown in the same figure, another effect of these impurities is the splitting of graphene’s G-peak into two, naming the other one as the D’ peak. It is said that this is due to the interaction of the vibrational modes coming from the impurities towards the phonon mode of graphene. (Childres, Jauregui, Park, Cao, & Chen, 2013) One of the differences between the monolayer and multi-layered graphene is the ratio between 2D and G. Direct proportionality is exhibited by the ratio as a function of graphene layers.

3.1. \( V_{rms} \) Difference of the ECG Waves

Table 2. The \( V_{rms} \) difference of the ECG waves for the P, R, and T waves coming from the electrodes based on composition.

<table>
<thead>
<tr>
<th></th>
<th>P Wave</th>
<th>R Wave</th>
<th>T Wave</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional on Left, Commercial on Right</td>
<td>0.085</td>
<td>0.557</td>
<td>-0.103</td>
</tr>
<tr>
<td>Commercial on Left, Conventional on Right</td>
<td>0.050</td>
<td>-0.501</td>
<td>0.153</td>
</tr>
<tr>
<td>Experimental on Left, Conventional on Right</td>
<td>-0.029</td>
<td>0.390</td>
<td>-0.152</td>
</tr>
<tr>
<td>Conventional on Left, Experimental on Right</td>
<td>-0.050</td>
<td>-0.478</td>
<td>0.081</td>
</tr>
<tr>
<td>Experimental on Left, Commercial on Right</td>
<td>0.139</td>
<td>0.713</td>
<td>-0.041</td>
</tr>
<tr>
<td>Conventional on Left, Experimental on Right</td>
<td>0.115</td>
<td>-0.380</td>
<td>0.197</td>
</tr>
</tbody>
</table>

Despite the changing of the placement of the commercial electrodes with respect to the conventional and experimental ones, results have shown consistent positive differences for P-wave which indicate that the signal was amplified for the commercial graphene electrodes. (Refer to Table 2) The 2 negative results under the same wave indicate the signal was more amplified by the
conventional electrode than the experimental conductor. The results of R-wave and T-wave are highly affected by the positioning of the electrodes. Exchanging the positions of graphene (both commercial and experimental) and conventional electrodes have led the amplification to alter either on R-wave or T-wave.

Table 3. The \( V_{rms} \) difference of the ECG waves for the P, R, and T waves coming from the electrodes based on size.

<table>
<thead>
<tr>
<th>P Wave</th>
<th>R Wave</th>
<th>T Wave</th>
</tr>
</thead>
<tbody>
<tr>
<td>4cm on Left, 3cm on Right</td>
<td>-0.132</td>
<td>-0.697</td>
</tr>
<tr>
<td>3cm on Left, 4cm on Right</td>
<td>0.395</td>
<td>0.524</td>
</tr>
<tr>
<td>5cm on Left, 4cm on Right</td>
<td>0.012</td>
<td>-0.631</td>
</tr>
<tr>
<td>4cm on Left, 5cm on Right</td>
<td>0.052</td>
<td>0.812</td>
</tr>
<tr>
<td>5cm on Left, 3cm on Right</td>
<td>-0.095</td>
<td>-0.627</td>
</tr>
<tr>
<td>3cm on Left, 5cm on Right</td>
<td>-0.079</td>
<td>0.611</td>
</tr>
</tbody>
</table>

From Table 3, 5 cm results have shown positive differences in the P-waves when compared to 4 cm. However, when these conductors were placed together with the 3 cm, the smaller size amplified more signal. Alternating results were obtained from the P-wave signal between 3 cm and 4 cm.

In terms of the R-wave and T-wave, the occurrence that happened on the data based from composition was also exhibited in this area. The signal amplification favors either on the two different electrodes, depending on how these were placed. This leads to the assumption that the results of the electrodes of different sizes were greatly affected by their placement. The amplification of each R-wave and T-wave has a favored position on the subject’s body for these to occur.

Table 4. The \( V_{rms} \) difference of the ECG waves for the P, R, and T waves coming from the electrodes based on shape.

<table>
<thead>
<tr>
<th>P Wave</th>
<th>R Wave</th>
<th>T Wave</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rectangle on Left, Triangle on Right</td>
<td>-0.135</td>
<td>-0.573</td>
</tr>
<tr>
<td>Triangle on Left, Reactangle on Right</td>
<td>-0.112</td>
<td>0.364</td>
</tr>
<tr>
<td>Circle on Left, Rectangle on Right</td>
<td>0.018</td>
<td>0.74</td>
</tr>
<tr>
<td>Rectangle on Left, Circle on Right</td>
<td>-0.059</td>
<td>-0.430</td>
</tr>
<tr>
<td>Circle on Left, Triangle on Right</td>
<td>0.111</td>
<td>0.592</td>
</tr>
<tr>
<td>Triangle on Left, Circle on Right</td>
<td>0.071</td>
<td>-0.345</td>
</tr>
</tbody>
</table>

Triangular electrodes show both positive \( V_{rms} \) differences on different sides along with the circular electrodes. (Refer to Table 4) The rest of the differences under the same wave indicate that circular
electrodes are more dominant for signal amplification. Same with the statement mentioned from the previous paragraphs, the differences on R-wave and T-wave also favor in a specific position which results to their alternating data.

### 3.2. SNR of the ECG Waves

Table 5. The SNR of the ECG waves for the P, R, and T waves coming from the electrodes based on their composition.

<table>
<thead>
<tr>
<th></th>
<th>Commercial</th>
<th>Conventional</th>
<th>Experimental</th>
</tr>
</thead>
<tbody>
<tr>
<td>P Wave</td>
<td>21.837</td>
<td>19.778</td>
<td>18.387</td>
</tr>
<tr>
<td>R Wave</td>
<td>21.824</td>
<td>20.818</td>
<td>19.585</td>
</tr>
<tr>
<td>T Wave</td>
<td>20.902</td>
<td>20.154</td>
<td>19.243</td>
</tr>
</tbody>
</table>

The data gathered was based on the SNR collected for each type of electrodes at different positions. From Table 5 above, the commercial graphene electrodes have exhibited the highest in all the ECG waves. This consistency can lead to the observation that the application of pure graphene has therefore increased the sensitivity of the electrodes in obtaining the signals coming from the heart. Aside from the mentioned electrodes, both conventional and experimental electrodes exhibit consistency on the SNR. Since the experimental electrodes are still characterized to have impurities, this might lead to less sensitivity than the conventional electrodes that use Ag-AgCl for the conductance.

Table 6. The SNR of the ECG waves for the P, R, and T waves coming from the electrodes based on their size.

<table>
<thead>
<tr>
<th></th>
<th>3 cm</th>
<th>4 cm</th>
<th>5 cm</th>
</tr>
</thead>
<tbody>
<tr>
<td>P Wave</td>
<td>20.228</td>
<td>20.939</td>
<td>19.521</td>
</tr>
<tr>
<td>R Wave</td>
<td>21.062</td>
<td>20.029</td>
<td>22.068</td>
</tr>
</tbody>
</table>

Unlike Table 5, the electrodes with different sizes found on Table 6 are inconsistent on their SNR values. Each wave favors on each of the electrodes present. For instance, 4 cm electrodes are most sensitive at P-wave, while lowest on the remaining waves. T-wave favors more for 3 cm electrodes, while the largest electrodes are most sensitive on R-wave. A factor that can contribute to the results is the composition of each electrode, since the process of doing this is through exfoliation that as mentioned in the previous chapters is more prone to impurities. With this, the findings infer that the size of graphene electrodes has barely affected the electrodes in doing the recording of the electrical signals from the heart.

Table 7. The SNR of the ECG waves for the P, R, and T waves coming from the electrodes based on their shape.

<table>
<thead>
<tr>
<th></th>
<th>Triangular</th>
<th>Square</th>
<th>Circular</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-Wave</td>
<td>22.277</td>
<td>18.431</td>
<td>19.556</td>
</tr>
</tbody>
</table>
Between these three types of electrodes, the consistency is only shown by the triangular electrodes which also got the highest SNR values. Under the Raman Spectroscopy, these electrodes correlate the most with pure graphene from CVD. With this regard, this reason can be the explanation of the data mentioned in Table 7, since the rest of the SNR values coming from the square and circular electrodes do not correlate with each other. Circular electrodes are least sensitive on R-waves, while the rectangular ones on both P-waves and T-waves.

3.3. Peak Time Interval of the ECG Waves

![Graph](image)

Figure 5. The time intervals of the conventional and commercial graphene electrodes between their P and T waves.

By getting the time interval between the two kinds of electrodes, this would determine if both are acquiring the right heart signal. (Calalan & Go, 2011) Found on Figure 5 is the time interval between the P and T peaks of commercial and conventional electrodes. The time for commercial electrodes is barely seen on the illustration, since its data coincides with the conventional conductors’. This indicates that at the data acquisition, both electrodes are obtaining the right heart signal simultaneously. This occurrence also happened throughout the two kinds of electrodes placed on the patient’s body.
Figure 6. The time intervals of the conventional and commercial graphene electrodes between their P and R waves.

The difference of time intervals occurred on the R-waves as shown in Figure 6. The error between the data can be a result of the subject’s respiration. The expansion of his chest has led the distance of the signal to also increase, therefore causing a variance from the neighboring electrodes. 10-20 millisecond difference was found between the values of the electrodes with regards to the R-waves. This has led to have an overall percent difference of about 0.11%. The mentioned range is also exhibited on the R-waves coming from the other electrodes.

4. CONCLUSION

Based from the peak time intervals, the electrodes were acquiring the same heart signal for all ECG waves, considering the minimal differences at R waves due to subject’s respiratory cycle. The amplification of commercial graphene electrodes was exhibited on P-waves despite the exchanging placement of the conductors. The data acquisition is highly dependent on the positioning of the electrodes that serves as a major factor of the error. Nevertheless, the application of graphene to the electrodes has shown the greatest sensitivity with their considerable SNR values.

The size and shape of graphene has barely affected the signal amplification and sensitivity of the electrodes in obtaining the electrical activity of the heart. Triangular electrodes have exhibited the greatest SNR values, indicating that it the most sensitive electrodes for all the ECG waves. The results can still be dependent on the composition of each sample, since it is assumed there are still certain impurities aside from graphene.

Graphene was prepared here through the process of exfoliation in a laminating film, thus the only way for application is by attaching the product to the electrode. Furthermore, the commercial graphene I obtained is minimal. With this, more feasible ways should be done to incorporate the graphene in the electrodes. Exfoliation is one of the possible ways to make graphene, however the chances of obtaining a pure extract was randomly localized in clustered areas.

5. ACKNOWLEDGEMENT

We would like to extend our deepest appreciation to PCARI-CHED under the IHITM 09-2016 Project for funding this research work. We would like to acknowledge Dr. Armando Somintac as well from the National Institute of Physics (NIP) at UP Diliman, Quezon City in facilitating the use of Raman Spectrometer in analysing our graphene samples during the course of our material’s characterization.

6. REFERENCES


A STUDY ON FOOD ADDITIVE FREQUENCY OF BISCUIT AND CANNED BEVERAGES AND THEIR COMPLIANCE LEVEL

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ABSTRACT

The development of processed food industry had skyrocketing the demand and application of food additive. With all the immerging issues which includes food additive awareness and the associated health risk as a result of food additive application; regulation and safety assessment of food substances is needed in order to check the application level of food additives and its compliance status. Thus, this study was conducted to study the food additive frequency and compliance level of the selected processed food in Kuala Lumpur region. A survey was done where sample which are biscuit and canned beverages were collected randomly on the shelf at the market. With the Total of 113 sample of biscuit and 67 sample of canned beverages was obtained, the frequency is calculated and compliance level was studied based on Food Act 1983 of Malaysia law. Overall, 34 and 20 food additive had been identified in biscuit and canned beverages respectively where all the biscuit products had added food additive while 66 out 67 for the canned beverages. The frequency of flavouring additive is high in both biscuit and canned beverages. In biscuit, emulsifier and leavening agent is most frequently added while for the canned beverages acid regulatory and colouring is most commonly used. As for the compliance status, food additive that applied in Malaysia is not at the critical level and both product did comply the legislation of Malaysia according to the Food Act 1983. As the market is growing it is important for the law to keep track on the food additive development to reduce the health risk faced by the public concerning the food additive. Further research can be done in term of consumer awareness and laboratory work

Keywords: Awareness; Beverages; Healthy; Food act; Legislation;

1. INTRODUCTION

Food is one of the necessities that human beings need to survive. However, most foods, whether if it is meat, vegetables or dairy products have a short lifespan in terms of edibility itself. This fact has made it necessary for humans to find ways in preserving food to prolong the duration of its consumption life. Food and Drug Administration (FDA) defines food additive as any substance the intended use of which results or may reasonably be expected to result weather directly or indirectly in its becoming a component or otherwise affecting the characteristics of any food. Food additive is substances which are of little or no nutritive value, but are used in the processing or storage of foods or animal feed, especially in the developed countries; includes antioxidants; food preservatives; food colouring agents; flavouring agents; anti-infective agents; vehicles; excipients and other similarly used substances (2010). Food additive is classified into several group based on their function. Abdulmumeen et al. had classified these
additive into 18 group which are acids, acidity regulators, anticaking agents, antifoaming agents, antioxidants, bulking agents, food colouring, colour retention agents, emulsifiers, flavours, flavour enhancers flour treatment agents, glazing agents, humectants, tracer gas, stabilizers sweeteners and thickeners where there is some overlap between the group in term of function (2012).

Food additive is reported as a substance that may contribute to some reaction such as intolerance because of individual sensitivity to several substances regardless the additive is artificial or natural. There are also possibilities that the food is contaminated with toxic substance during production or processing where the adverse reaction toward this additive includes toxic, allergic and intolerance reaction (Hayder et al., 2011). While the study of the effect of preservatives and flavour additive on the production of oxygen free radicals by isolated human neutrophils shows that most of the food additive tested produce significant effect on the oxidative respiratory burst and phagocytosis if isolated human PMNs (Al-Shammari et al., 2014). There evidence showing that food additives can cause hyperactivity in children aged 3 to 9 years old (Fox. M. et. al,2007). Other than the additive itself, the possibilities of formation from other compound due to the reaction is also an issue. For example the formation of benzene where food with ascorbic acid content is not suitable to be preserve with benzoic acid to eliminate possible benzene formation during long-term storage (Casado et al., 2011).

Processed foods often contain additives, artificial flavourings and other chemical ingredients (FDA,2015). Biscuit and beverages had gained it position in the processed food market as it is suitable to be consuming anywhere and anytime. Since biscuit and beverages are processed food thus it both contain food additive. The increment in market demand of this two product shows that it is widely consume. Along with this, the development of new additive can be an issue of health risk when it is widely used by the industry. The usage of additive also can be an issue for Muslim consumer when the source is doubtful. As for that, this study was done to study the compliance level of additive frequency in biscuit and beverages.

2. METHODS

This study is done by observing on the ingredient list based on the label where data is collected by selecting sample from the shelf at the market and the ingredient on the label is analysed. In this research sample is collected from three random selected supermarkets in Kuala Lumpur region. 113 samples of biscuit and 67 samples of canned beverages were obtained. This sample is screened to be available in most of the supermarket in the region where sample that is identified to be not familiar in the local market cut out from the sample list. From the sample collected the list of ingredient is listed and the food additive was identified.

2.1. Size of Dataset

In this study random sample was taken out for sampling biscuits and beverages. Random sampling of biscuit product on the shelf give out 16 type of brand in total. Total of 113 of product that have been selected for the research which consist of 16 brand. While for beverages, it was randomly selected over the shelves. There are 16 type of brand in total that have been displayed.

2.2. Food Additive Awareness and Other Health Risk

Based on a study in Korea, consumer awareness on food additives was influenced by their experience, education, and knowledge where with proper education, consumers can obtain a positive awareness of food additives, and various types of consumer education programs should be provided (Lee et al., 2014). From the study, more than two thirds expressed that information
on food additives was insufficient (Shim et al., 2011). Jean Weiss (2009) mention that sodium nitrite, butylated hydroxyanisole (BHA) and butylated hydroxytoluene (BHT), propyl gallate, monosodium glutamate, trans-fats, aspartame, acesulfame-k, food colourings (Blue 1, 2; Red 3; Green 3; and Yellow 6), olestra, white sugar and sodium chloride is among the list of 12 food additive to avoid. An article entitle Analysis Confirms Chemicals in Food Are More Hazardous in Combination by Mercola (2015) have listed propyl paraben, sodium benzoate, sodium nitrate, potassium, BHA and BHT, propyl gallate, diacetyl, artificial colour, and aluminium additive as additive to be avoided. olestra or olean, brominate vegetable oil, potassium bromate, BHA and BHT, azodicarbonamide, artificial food colouring and synthetic food dyes, rbgh or rbst hormones, arsenic and formaldehyde are banned in many countries except US. Food hypersensitivity (allergy) is due to an immunologic reaction resulting from the ingestion of a food or food additive. Even with a small amount ingested, this reaction may occur for contain individual because of their immune response that typically involves the IgE mechanism. The response may occurs incudes cutaneous, respiratory, gastrointestinal, oral or multiple response (Jones & Burks, 2008). As for this reason the food additive is not only giving out this risk of ADHD, nauseas, headache and tumour but also allergy.

2.3. Regulation and safety assessment of food substances

In 1963, harmonize international food standards named The Codex Alimentarius or "Food Code" had been developed in order to which protect consumer health as well as promote fair practices in food trade. The international food standards, guidelines and codes of Codex Alimentarius is practicing toward safety, quality and fairness of this international food trade. Codex Alimentarius Commission (CAC) is a government-to-government organization that conducts its business through a network of committees (Kimbrell, 2000). Among the main roles of the CAC are forming international food standards for permitted food additives providing maximum levels in foods, highest limits for contaminants and toxins, highest residue limits for pesticides and for veterinary drugs used in veterinary animals, and establishing hygiene and technological function practice where Malaysia is also a member of CAC codes (CAC, 2006). Both FAO and WHO also forming a joint committee named The Joint FAO/WHO Committee on Food Additives (JECFA) in 1955 which had outline the situations in which food additives should not be used, principles and procedures for the testing of food additives to establish the safety, the recommendation that when a food additive is proposed for use. JECFA is has continuously to be of fundamental importance especially to the Codex Committee on Food Additives (CCFA) and the Codex Committee on Contaminants in Foods (CCCF) activity of the CAC. (Magnuson et al., 2013). As recognised by the FAO and WHO in 1992 to get a safe food is a consumer right because of that legislation is needed to ensure food meet the safety standard followed by comprehensive provision since there are relationship between food intake and serious health risk. ASEAN countries have enacted their own legislation to overcome such problem where for Malaysia it is Food Act 1983 and Food Regulation 1985 (Ismail, 2011).

3. RESULTS AND DISCUSSION

3.1. The frequency of food additive usage in biscuit product.

From the total 113 sample of biscuit 34 additive had been listed where the function of its addition was identified with quite a number of E Code from the ingredient list. However, in the set, there also additive that is listed based on the function only not the substance for example

<table>
<thead>
<tr>
<th>PART V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food Additive and Added Nutrient</td>
</tr>
<tr>
<td>19. Food additive.</td>
</tr>
<tr>
<td>...</td>
</tr>
<tr>
<td>6) There shall be written in label on a package containing food additive imported, manufactured, advertised for sale or sold-</td>
</tr>
<tr>
<td>(a) the words &quot;(state the chemical name of the food additive) as permitted (state the type of food additive)&quot;; provided that in the case of colouring substance or flavouring substance it shall be sufficient to state the common name or appropriate designation of the food additive in place of the chemical name; and</td>
</tr>
<tr>
<td>(b) a statement giving direction for its use.</td>
</tr>
</tbody>
</table>

Figure 1 Food Act 1983 (September, 2015)

Summarizing this part of regulation stated by the law, the chemical name of food additive should be mentioned. From the data collected which is the ingredient listing, 11 product out of 88 that stated to have emulsifier in their ingredient does not specify their emulsifier, 4 product out of 94 for leavening agent, 48 out of 87 for flavouring and 8 out of 24 for colouring additive. It is more than half for of product that have flavouring in their listing does not specify the substance. Overall, biscuit product main additive are leavening agent, emulsifier and flavouring.

3.2. The frequency of food additive usage in beverages product.
From 67 sample of canned beverages, 20 additive had been listed in the total where the E Code displayed from the ingredient list is quite low in number. The list of additive in canned of beverages is much shorter where the main additive is flavouring. Even though there is no specification on what are the flavour added 8 out of 55 product with flavouring have claim the source of flavour which is natural or artificial. Not to missed that out of 33 product claim to have colouring inside their product 26 product does not display what are their colour additive.

3.3. Comparing food additive usage in biscuit and beverages.
Analysing the list of ingredient in both sample there is no banned ingredient is added as referred to the Food Act 1983. There are wider range of food additive in biscuit compare to beverages but somehow both have shown quite high in number of flavouring added to the product. Both product have flavouring, colouring, acid regulator, emulsifier, preservative, antioxidant, anticaking, and sweetener in their additive but different frequency. As for biscuit, adding up the list it had modified starch, stabiliser, filling agent, enzyme, bread improvers, added nutrient and leavening agent whereas for canned beverages it have stabilizer and anti-foaming.

The percentage of additive listed in both sample pool is calculated. Figure 4.5 is comparing the frequency between the two sample pools in percentage. Both biscuit and canned beverages has high number of flavouring. The leavening agent and emulsifier seems to be more common to be added to the biscuit product while the acid regulatory and preservative is common to be in canned beverages. This show that different type of processed food need different weightage of additive in base on uses.
The only data that have been found on percentage of food additive is from United State by Becker et al. (2014) where the axis of additive with the data Food Essentials and Institute of Food Technologists Center for Science in the Public Interest that is presented in percentage. The data had been simplified in Table 1.

**Table 1 Percentage of additive in drink and baked good (%)**

<table>
<thead>
<tr>
<th>Additive</th>
<th>Drink</th>
<th>Baked good</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric acid</td>
<td>41</td>
<td>29</td>
</tr>
<tr>
<td>Natural and artificial flavour</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>Natural Flavour</td>
<td>39</td>
<td>20</td>
</tr>
<tr>
<td>Maltodextrin</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Soy Lechitin</td>
<td>3</td>
<td>39</td>
</tr>
<tr>
<td>Calcium phosphate</td>
<td>3</td>
<td>25</td>
</tr>
<tr>
<td>Caramel 1</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>Red 40</td>
<td>11</td>
<td>10</td>
</tr>
</tbody>
</table>
### Table 2 Percentage of additive canned beverages and biscuit (%)

<table>
<thead>
<tr>
<th>Additive</th>
<th>Drink (Canned Beverages)</th>
<th>Baked good (Biscuit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric acid</td>
<td>37.3</td>
<td>3.54</td>
</tr>
<tr>
<td>Natural and artificial flavour</td>
<td>49</td>
<td>21</td>
</tr>
<tr>
<td>Natural Flavour</td>
<td>1.5</td>
<td>3.54</td>
</tr>
<tr>
<td>Maltodextrin</td>
<td>-</td>
<td>3.5</td>
</tr>
<tr>
<td>Soy Lechitin</td>
<td>-</td>
<td>33.9</td>
</tr>
<tr>
<td>Calcium phosphate</td>
<td>-</td>
<td>2.65</td>
</tr>
<tr>
<td>Caramel 1</td>
<td>11.9</td>
<td>8.85</td>
</tr>
<tr>
<td>Red 40</td>
<td>3.5</td>
<td>-</td>
</tr>
</tbody>
</table>

Comparing the data from Table 1 and 2 there are obvious difference for natural and artificial flavour, natural flavour, maltodextrin, soy lecithin and calcium phosphate between the drink in US and also canned beverages in Malaysia where more natural and artificial flavour is used more in this country compare to natural flavour, maltodextrin, soy lecithin and calcium phosphate that is more frequent in US. As for baked good in US and biscuit in Malaysia, the additive that show a gap in percentage are citric acid, citric acid, natural flavour, calcium phosphate and Red 40 where each of this additive show a higher percentage in US.

### 3.4. Reviewing compliances of additive with the Food Act 1983

Results should be clear and concise. Results should be clear and concise Results should be clear and concise. Results should be clear and concise. Discussion must explore the significance of the results of the work. Adequate discussion or comparison of the current results to the previous similar published articles is recommended to shows the positioning of the present research (if available).

Apparently all the listed ingredient with that had their chemical name mention is approved available in the food act 1983 except for maltodextrin. Maltodextrin is filling agent that had been listed in 4 ingredient listing of biscuit product. Even though, this item is not listed in the food act 1983, it is approved food additive as stated in FDA (2015) and EFSA (2013). Nevertheless, there are quite a number of ingredient that should be put on the concern list because of the health cases reported. This include the antioxidant, food colouring, added nutrient and also artificial sweetener which are BHA, BHT Propyl Gallate, TBHQ, tartrazine, ferric pyrophosphate and also aspartame k. This ingredient have been reported to cause quite a number of health issue include asthma, cancer and also hyperactivity. However, since the frequency of this substance is still low in number, there is less to worry about.

This study had referred to various section of Food Act 1983. This includes Part V of the act which are Food Additive and Added Nutrient that include the labelling manner, claim and application of food additive, preservative, antimicrobial agent, colouring substance, flavouring substance, flavour enhancer, antioxidant, food conditioner, added nutrient and bifido bacteria. Biscuit on the other hand fall under flour confection in regulation 135 where the amount of additive such as sorbic acid and propionic acid salt for and its sodium, potassium or calcium salt does not exceed 2000mg/kg and add permitted colouring and flavouring substance. For those with chocolate should comply the regulation 279. Additionally, for canned beverages, the regulation is divided according to the type of beverages where for tea and coffee was regulated under 260 to 273 and soft drink that includes flavoured drink was mentioned under regulation 348 to 360. The details on this additive is supported in the Seventh schedule (Regulation 21),
Eighty schedule (Regulation 22), Ninth schedule (Regulation 23), Eleventh schedule (Regulation 25), and Twelfth schedule (Regulation 26) (Food Act 1983, 2015).

3.5. Halal Status based on the E Code

Seeking halal food is obligatory for a Muslim. Since Malaysia is an Islamic country it seem to be important to see this additive study from Islamic perspective. From then mentioned E Code above, the list is made and checked the halal status as claimed by Jabatan Kemajuan Islam Malaysia (JAKIM). The list is presented in Table 3. Among the E Code listed presenting the additive added to the biscuit and canned beverages some of the additive is approved as halal, halal with condition and some of it is mushbooh in which should be a concern for the consumer when the source is unmentioned. Other from that 7 item had been identified not to be available in the list presented by JAKIM (2012).

Food and food additive itself is either plant or animal resources which make is vulnerable to be a halal or haram. Halal means lawful and permitted in Islam. This does not only refer to the product be free from pork but free from filth and does not bring any harm to the body. Food labelling regulation encourage manufacturer to state the list of ingredient but not the source. However since Malaysia is the leading in halal manufacturing the identification is much easier in which a presentation of legal JAKIM logo is sufficient in order to be confident in consuming halal processed food.

Malaysia processed food industry is growing along with the lifestyle of developing country. According to New Zealand Trade and Enterprise (2012) the sales of food and beverages in Malaysia were predicted to reach US$15.69 billion in 2011 and in 2015 it is forecast to increase up to US$21.17bn. With the increment in the industry, more new product is produce. This is more likely the dominos effect when there is increment of new food product, the usage of additive will increase and because of then the demand of additive increase. The diverse type of plant species especially should be the contribution factor of discovering in sustainable manner of the new additive of natural resources instead of chemical additive. However, when the nature is unable to support the demand or maybe the natural additive can be quite costly, manufacturer will go for artificial additive and basically it will contribute to a possibly new additive with health risk. Either new additive is synthetic or natural, both condition may put the public health at stake when the legislation failed to take charge. As for that it is important for the law to keep track on the food additive.
Table 3: *Halal* Status of additive based on the *E* Code

<table>
<thead>
<tr>
<th>E Code</th>
<th>Halal Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>Halal if pure grind turmeric powder or granular. Mushbooh if used as liquid, the solvents has to be Halal. Haraam if hidden ingredient is pork fat based emulsifier in dry mix.</td>
</tr>
<tr>
<td>102</td>
<td>Halal / Allowed if used as 100% dry color. Mushbooh if used as liquid color, the solvent has to be Halal</td>
</tr>
<tr>
<td>110</td>
<td>Halal if used as 100% dry color. Mushbooh if used as liquid color, the solvent has to be Halal</td>
</tr>
<tr>
<td>150</td>
<td>Halal</td>
</tr>
<tr>
<td>150</td>
<td>Halal</td>
</tr>
<tr>
<td>160</td>
<td>Halal if used as 100% dry color. Mushbooh if used as liquid color, the solvent has to be Halal</td>
</tr>
<tr>
<td>223</td>
<td>Halal</td>
</tr>
<tr>
<td>296</td>
<td>Halal</td>
</tr>
<tr>
<td>300</td>
<td>Halal</td>
</tr>
<tr>
<td>322</td>
<td>Halal if obtained from soy fat or egg yolk in Europe. It is Halal in USA because it is always obtained from soy fat</td>
</tr>
<tr>
<td>330</td>
<td>Halal</td>
</tr>
<tr>
<td>330</td>
<td>Halal</td>
</tr>
<tr>
<td>331</td>
<td>Halal</td>
</tr>
<tr>
<td>339</td>
<td>Halal</td>
</tr>
<tr>
<td>340</td>
<td>Halal</td>
</tr>
<tr>
<td>341</td>
<td>Halal if calcium from mineral source</td>
</tr>
<tr>
<td>450</td>
<td>Halal</td>
</tr>
<tr>
<td>451</td>
<td>Not Available</td>
</tr>
<tr>
<td>452</td>
<td>Not Available</td>
</tr>
<tr>
<td>452</td>
<td>Not Available</td>
</tr>
<tr>
<td>471</td>
<td>Mushbooh, Halal if it is from plant fat, Haraam if it is from pork fat</td>
</tr>
<tr>
<td>472</td>
<td>Mushbooh, Halal if it is from plant fat, Haraam if it is from pork fat</td>
</tr>
<tr>
<td>473</td>
<td>Mushbooh, Halal if it is from plant fat, Haraam if it is from pork fat</td>
</tr>
<tr>
<td>481</td>
<td>Mushbooh, Halal if it is from plant fat, Haraam if it is from pork fat</td>
</tr>
<tr>
<td>500</td>
<td>Halal</td>
</tr>
<tr>
<td>503</td>
<td>Halal</td>
</tr>
<tr>
<td>511</td>
<td>Not Available</td>
</tr>
<tr>
<td>551</td>
<td>Halal</td>
</tr>
<tr>
<td>953</td>
<td>Not Available</td>
</tr>
<tr>
<td>965</td>
<td>Not Available</td>
</tr>
<tr>
<td>1200</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

Source: *JAKIM* (2012)

4. **CONCLUSION**
Processed food market is booming for the past few years to fit the life style of developing country. In most supermarket in Malaysia there are specific aisle that displayed these processed food according to their type in which includes canned biscuit and canned beverages. This study have listed quite range of food additive applied in both biscuit and canned beverages where there are wider range of additive in biscuit compared to the canned beverages. The data shows that food additive frequency in both in biscuit and canned beverages is diverse according to the type of processed food where 34 type of additive have been identify in biscuit and 20 additive in canned beverages. The frequency of flavouring is high on both biscuit and canned beverages in which indicating that flavouring is most important additive. In biscuit, emulsifier and leavening agent is most frequently added while for the canned beverages acid regulatory and colouring is most frequently used. As for the compliance status, food additive that applied in Malaysia is not at the critical level and the products is complying the legislation of Malaysia according to the Food Act 1983. It is identified that food additive is available in every 113 product of biscuit and 66 out of 67 in canned beverages that being sampled. Frequency of food additive is vary based on type of product. For example leavening agent is highly available in biscuit product while acid regulator is more dormant in canned beverages. As the market is growing it is important for the law to keep track on the food additive development. Malaysia legislation is following the track as it is regularly updated with amendment for instance the latest version of Food Act 1983 is published in April 2016 in a gap 7 month from the previous version that is published in September 2015. It is important for the public to be aware of the content in the processed food that they consume and for the government to continuously monitor the food production to prevent food adulteration.

5. ACKNOWLEDGEMENT

We would like to express our sincere gratitude to UMRG RP 027E-15HNE grant under Cluster Humanities and Ethics, University of Malaya for the funding support. International Halal Research University of Malaya (IHRUM) and all participants which involve in this research.

6. REFERENCES


THE DEVELOPMENT OF A TWO-TIER MULTIPLE-CHOICE DIAGNOSTIC INSTRUMENT FOR EVALUATING PRE-UNIVERSITY STUDENTS’ ABILITY TO DESCRIBE AND EXPLAIN ORGANIC COMPOUND STRUCTURES AND REACTIONS.

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²Department of Mathematics and Science Education, Faculty of Education, University of Malaya, 50603 Malaysia.

ABSTRACT

Fifteen questions of a two-tier multiple-choice diagnostic instrument was developed to evaluate pre-university students’ ability to describe and explain organic compound structures and reactions using symbolic representations. A mixed course and gender case study was conducted involving pre-university students. The instrument was chosen after they have gone through the pre-university studies for six months and has some basic knowledge in the organic subject.

Keywords: Chemical compounds; structure; reaction; symbolic representations

1. INTRODUCTION

The theoretical basis of this study is a constructivist approach that is grounded in the belief that what a learner already knows is a major factor in determining the outcomes of learning (Ausubel, 1968). As mentioned by Ben-Zvi et al. (1987, 1988), Johnstone (1991, 1993), Nakhleh (1992), Gabel (1998, 1999), Treagust and Chittleborough (2001), the complex and abstract nature of chemistry makes the study of the subject difficult for students especially for those who are forced to study the subject. The misconceptions that chemistry is difficult to understand cause learners not to select this subject as their favourite or elective course. According to Yarroch (1985), Andersson (1986), Ben-Zvi et al. (1986), Gabel et al. (1987), Johnstone (1991, 1993), Nakhleh and Krajcik (1994), one of the reasons for the difficulties that students experience in understanding the nature of matter is related to the multiple levels of representation that are used in chemistry instruction to describe and explain chemical phenomena. The students are likely to be satisfied with their own perceptions when viewing materials that are presented by their teachers or textbooks are “through the lenses of their preinstructional conceptions” (Duit and Treagust, 1995; p. 47) but are not able to translate one given representation into another due to their limited conceptual knowledge and poor visual-spatial ability (Seddon and Eniaiyeju, 1986; Keig and Rubba, 1993).

The objective of this study is to identify the problems faced by pre-university students in understanding and applying the knowledge gained in lectures.

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Permalink/DOI: https://doi.org/10.14716/ijtech.vxix.xxxx
Learners are taught the introduction to organic chemistry for a certain number of hours and then assumed that they can input all the information and deliver their understanding on paper.

2. METHODS

This case study was conducted on pre-university students who had learned organic chemistry at Level 1 for 6 months. The sample consists of two different courses, the Physical Science course and the Life Science course, and is separated into different groups and genders. Figure 1 summarizes the development of diagnostic test which started from diagnosing students weakness and difficulties in a particular scientific concept to trigger common misconceptions among students. The instrument was developed in two stages; stage 1 involved defining the content area of the study and stage 2 involving the reasoning and explaining of choices made as shown in Figure 1. The diagnostic instrument consists of 15 two-tier multiple choice questions prepared according to pre-university chemistry syllabus and is separated into two constructs; construct A is used to determine the students knowledge on certain topics and construct B is used to determine the ability of the students to apply all concepts that they know in answering the question. Table 1 show some selected samples of the tier-1 and tier-2 questions conducted in this case study.

![Figure 3. Scheme of development of the diagnostic instrument](image-url)
Table 3. Selected samples of diagnostic chemistry questions.

**Question 1 (Construct A)**
What do you understand about nucleophile?

Main answer:
- a. An electron rich species which will attack an electrophilic site.
- b. Negative ions.
- c. Species which needs more electron.
- d. An element which is rich in electron.

Which one of the followings is the reason of your answer to the previous question?
- a. Nucleophile is an electron rich.
- b. Nucleophile act as an electron accept or group.
- c. Nucleophile has negative charge.

**Question 4 (Construct B)**
Classify the AlCl$_3$ molecule as a nucleophile or an electrophile.

Main answer:
- a. Nucleophile
- b. Electrophile

Which one of the followings is the reason of your answer to the previous question?
- a. AlCl$_3$ is an electrophile because this molecule has more electrons.
- b. AlCl$_3$ is an electron deficient species, which will attack nucleophilic site.
- c. AlCl$_3$ has 2 lone pair.
- d. AlCl$_3$ is rich in electrons.

3. **RESULTS AND DISCUSSION**

The responses of the students in Physical Science and Life Science courses to the diagnostic instrument were carried out for an hour. The 15 items were prepared in two constructs. Construct A is design to evaluate student’s understanding of scientific concept involving question 1, 2, 3, 7, 8 & 14. Whereas, construct B is designed for an application of the theory or concepts which consists in question 4, 5, 6, 9, 10, 11, 12, 13 & 15.

The results were analyzed using SPSS statistics software program. T1 represent the questions whereas T2 represents the reasoning for the answer given as shown in Table 2. From the analysis, there are only 5 questions where the students gave the correct answers with the correct reasons. Most of the students gave the correct answers but with the wrong reasons. This shows that there is a lack of understanding in the theory or concept and also indicates that the students are unable to relate and apply the theories of inorganic chemistry to organic chemistry.

Most of the students could answer the questions which only require memorizing of facts compared to the questions which ask for the application of their knowledge. This result shows that the students are unable to relate the topics in chemistry and they are still in the shadow of their school system of compartmentalizing their knowledge according to individual topics. Although question 4 and 5 are of construct B which covered the same topic, only one third of
the students managed to answer question 5 correctly. The students are unable to classify the compound in the organic reaction as shown by the result obtained for question 5 (Table 3).

<table>
<thead>
<tr>
<th>Gender/program</th>
<th>T1</th>
<th>T2</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male: Life Science</td>
<td>√</td>
<td>√</td>
<td>3, 4, 12</td>
</tr>
<tr>
<td></td>
<td>√</td>
<td>X</td>
<td>1, 2, 7, 10, 11, 13, 14, 15</td>
</tr>
<tr>
<td></td>
<td>X</td>
<td>√</td>
<td>5, 8, 9</td>
</tr>
<tr>
<td></td>
<td>X</td>
<td>X</td>
<td>6</td>
</tr>
<tr>
<td>Male: Physical Science</td>
<td>√</td>
<td>√</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>√</td>
<td>X</td>
<td>1, 2, 4, 6, 10, 11, 12, 13, 14, 15</td>
</tr>
<tr>
<td></td>
<td>X</td>
<td>√</td>
<td>3, 5, 7, 9</td>
</tr>
<tr>
<td></td>
<td>X</td>
<td>X</td>
<td>nil</td>
</tr>
<tr>
<td>Female: Life Science</td>
<td>√</td>
<td>√</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>√</td>
<td>X</td>
<td>1, 2, 3, 6, 9, 10, 11, 13, 14, 15</td>
</tr>
<tr>
<td></td>
<td>X</td>
<td>√</td>
<td>4, 5, 7, 8</td>
</tr>
<tr>
<td></td>
<td>X</td>
<td>X</td>
<td>nil</td>
</tr>
<tr>
<td>Female: Physical Science</td>
<td>√</td>
<td>√</td>
<td>13</td>
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<tr>
<td></td>
<td>√</td>
<td>X</td>
<td>1, 3, 4, 6, 8, 9, 10, 11, 14, 15</td>
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<tr>
<td></td>
<td>X</td>
<td>√</td>
<td>2, 5, 7, 12</td>
</tr>
<tr>
<td></td>
<td>X</td>
<td>X</td>
<td>nil</td>
</tr>
</tbody>
</table>

The reason for the difficulty may be due to the students’ inability to identify the character of the functional group, and thus are unable to identify the nucleophile or electrophile involved in the organic reaction. We can assume that the students are straight forward learner and the acquisition of knowledge without a clear understanding may be attributed to the confusion caused in having to deal with both inorganic and organic chemistry simultaneously (Gabel, 1998). The SPSS result also shows that students from Life Science course performed better than Physical Science course especially in memorizing of facts. However, Physical Science students are better than Life Science students in applying theory & concepts in Chemistry. From both courses, the female students performed better than the male students.
Table 3. Percentage for correct answer of selected questions.

<table>
<thead>
<tr>
<th>Question</th>
<th>Correct answer (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>90.3</td>
</tr>
<tr>
<td>2</td>
<td>77.3</td>
</tr>
<tr>
<td>4</td>
<td>58.3</td>
</tr>
<tr>
<td>5</td>
<td>10.4</td>
</tr>
<tr>
<td>13</td>
<td>48.5</td>
</tr>
<tr>
<td>15</td>
<td>71.1</td>
</tr>
</tbody>
</table>

4. CONCLUSION

The present study indicates that the developed online organic compound structures and reactions two-tier test has the potential to be used as a reference for lecturers to determine their students’ pre-existing knowledge. Therefore, based on students’ background knowledge, lecturers can design appropriate lesson planning that will help students to understand the organic chemistry and avoid them from alternative conceptions.

5. ACKNOWLEDGEMENT

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6. REFERENCES

POLYANILINE FOR CORROSION PROTECTION OF MILD STEEL

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ABSTRACT
A study of corrosion protection coating with PANI as additives in PVB was performed. Tube and particle morphologies of PANI were synthesised via the chemical polymerisation method. After which, physical and chemical characterisations were determined by HR-TEM, FTIR and Raman spectroscopy. Meanwhile, the evaluation on corrosion activities was observed by EIS and Tafel polarisation methods for 30 days in 3.5% NaCl solution. Compared to the systems of PVB and PVB+PANI-P, PVB+PANI-T which possesses the highest surface area, successfully delayed the corrosion rate at 1.732x10⁻⁴ mm/year.

Keywords: Coating; Corrosion; Polyaniline

1. INTRODUCTION
Coating with paint is a conventional method used to protect and enhance the ornament of a surface. However, due to its toxicity, which brings harm and pollution to the environment especially through the use of heavy metals during its preparation, a replacement for this type of coating must be seriously considered. A possible substitute is by the application of conducting polymer as an alternative coating material.

Corrosion protection by conducting polymers was initially proposed by MacDiarmid in 1985 (Zarras et al., 2003). In practice, the conducting polymer for corrosion control can be applied in two ways; (1) direct polymerisation onto the metal substrate as a protective primer film or (2) as additives in the mixtures of insulating polymers (Jafarzadeh et al., 2016). Among the polymers with the ability to conduct electricity are polyacetylene (PA), polypyrrole (PPy), polythiophene (PT), polyaniline (PANI), polyparaphenylene vinylene (PPV) and polyparaphenylene (PPP) (Bagheri et al., 2013). Conductivity happens inside the conducting polymers because of the arrangement of the alternating single and double bonds in the molecular structure of the polymers (Kalendová et al., 2015). This structure is referred as conjugated system. Additional to this, the conjugated system contains π-electrons delocalised along the polymer backbone (Zarras et al., 2003).
2.4. Corrosion evaluation

For corrosion analysis, the three electrodes system (working, counter and reference electrodes) with a glass cell attached was used. The size of the cell was approximately 5 cm in height with a 2 cm inner diameter. Araldite glass adhesive was used to attach the cell onto the mild steel plate. The corrosion study was done by electrochemical impedance spectroscopy (EIS) analysis. Data was taken between 100 kHz to 10 mHz at the rate of 10 points per decade and 5 mV signal amplitude around the open circuit potential (OCP). The coated cell was connected to the USB_IF030 interface-controlled Autolab PGSTAT302N and the Frequency Response Analysis (FRA) software was used to conduct the test and to analyse the data during the 30 days of measurements. On the 30th day of analysis, the Tafel study was done using the General Purpose Electrochemical System (GPES) software to obtain the corrosion rate of the coating. Measurements were taken between -1.0 to -0.2V at 5 mV s⁻¹.

3. RESULTS AND DISCUSSION

3.1. Material characterisation

The produced PANI as in Figure 1 (a) shows the morphology of the tube-like structure PANI structure with the inner diameter ranging 8.07-47.26 nm and the outer diameter ranging between 140.97-197.02 nm. In the polymerisation process, it has successfully produced a tube-like structure. The particle-like structure of PANI as in Figure 1 (b) demonstrates the particle size ranging between 91.90-397.00 nm. Both TEM images illustrate various inner diameters obtained for PANI from the preparation synthesis method. In addition, the ring patterns of selected area diffraction (SADP) (Figure 1 (c)) show the low crystallinity property of the material thus indicating that the material is in the amorphous structure.

Figure 1 TEM images of a) tube- and b) particle- structured PANI. Image c) is the SADP of PANI
Figure 2 shows the typical FTIR spectrums of PANI. The peak of 3266 cm\(^{-1}\) belongs to N-H stretching vibration. On the other hand, the peak at 2926 cm\(^{-1}\) is from the asymmetric stretching of C-H. The characteristic modes of the C=C quinoid ring (N=Q=N) and C=C benzenoid ring (N-B-N) are at 1569 and 1489 cm\(^{-1}\), respectively. At 1297 cm\(^{-1}\), it represents C-N stretching vibration mode. Finally, the peak of 880 cm\(^{-1}\) is due to the aromatic C-H out-of-plane deformation vibration of in linear PANI backbone (Sapurina et al., 2002).

The Raman spectrums (Figure 3) show the characteristic of PANI at the bands of approximately 1356.33 and 1554.46 cm\(^{-1}\). At 13.56.33 cm\(^{-1}\), the band belongs to the vC-N of the polaron in charged phenazine-like and/or oxazine-like rings in PANI while the 1554.33 cm\(^{-1}\) band is due to the vC=N of the quinoid units belonging to PANI (Venkata Ramana et al., 2011).

Figure 2 FTIR spectrums of PANI-P and PANI-T

Figure 3 Raman spectrums of PANI-P and PANI-T
3.2. Electrochemical studies of coatings

3.2.1 Electrochemical impedance spectroscopy (EIS)

The Nyquist plot describes the state of the coatings throughout the 30 days of impedance by providing details on the mechanism of the coating performances for corrosion protection (Sambyal et al., 2016). Set of data was taken every alternating days. Figure 4 shows the situation of the coating for all systems of PVB, PVB+PANI-P and PVB+PANI-T which are still in intact condition on the mild steel at Day 1. These are proven by the semicircle shaped illustrated from the plot.

![Nyquist plot](image)

Figure 4 The Nyquist plots for all samples at Day 1 for all samples and its equivalent electrical circuit used in the simulation

The equivalent circuit model above representing the pristine condition of the coating on the mild steel. The circuit is a way to describe the condition of the coating through out the exposure days. From the figure, it can be seen that $R_s$ (solution resistance) is in series with a parallel combination of $R_1$ (coating resistance) and $C_1$ (coating capacitance). At the early stage, the coating has protected the mild steel for any attack of electrons. Thus, higher value for $R_1$ can be obtained. When the value of $R_1$ is high, value of $C_1$ decreases. These $R_1$ and $C_1$ have inverse relationship.

As more penetration and damage occurs at the coating and the substrate, two semi-circles to real axis are observed as represented in Figure 5. For this type of plot, the semi-circle at the high-
frequency range shows the coating information while the semi-circle at the low-frequency shows the activity happens on the electrode surface (Amirudin & Thierry, 1995). Over the time, the solution has possibly penetrated the coating thus there are chances of electrons to attack the steel. The pores are the caused for localized corrosion to occur. After a few days, there are electrons stored in the coating. In this equivalent circuit below, $C_2$ is the double-layer capacitance while $R_2$ is the charge transfer resistance.

![Nyquist plot for all samples at Day 30 for and its equivalent electrical circuit](image)

**Figure 5** Nyquist plot for all samples at Day 30 for and its equivalent electrical circuit

### 3.2.2 Tafel polarisation

The potentiodynamic polarisation method is a powerful technique that can provide information on the protective properties of a coating system (Sambyal et al., 2016). The values were obtained after the system underwent immersion in 3.5% NaCl for 30 days. The surface morphologies of all samples were as in Figure 6. PVB coated mild steel (Figure 6 (b)) shows more affected area compared to PVB+PANI-P (Figure 6 (c)) and PVB+PANI-T (Figure 6 (d)) after the potentiostatic polarisation test was done at day 30 of immersion in 3.5% NaCl. The pinhole defects on each sample can be observed.
Figure 6 Physical appearance of a) coating on the 1st day after exposure to 3.5% NaCl solution. Meanwhile, the corroding effect can be observed after 30 days in contact with 3.5% NaCl for b) PVB, c) PVB+PANI-P and d) PVB+PANI-T.

From the Tafel extrapolation as shown in Figure 7, the corrosion potential ($E_{corr}$) values for PVB+PANI-P and PVB+PANI-T are directed towards positive values, which are at -0.596V and -0.640V respectively, compared to PVB at -0.719V. It can also be observed that the corrosion current density ($I_{corr}$) decreased from 2.011x10^{-7} A.cm^{-2} for PVB to 1.936x10^{-8} A.cm^{-2} for PVB+PANI-P and 1.492x10^{-8} A.cm^{-2} for PVB+PANI-T. This means that as the corrosion current density decreases, less corrosion activity happens on the coating surface. Based on the Tafel plots, the GPES software provided the values of corrosion rate. From Table 1, parameters of the coatings systems such as corrosion potential ($E_{corr}$), corrosion current density ($I_{corr}$), anodic ($b_a$) and cathodic ($b_c$) Tafel constants, polarisation resistance ($R_p$) and corrosion rate were recorded. Among all samples, PVB+PANI-T had the lowest corrosion rate, which was at 1.732x10^{-4} mm/year followed by PVB+PANI-P at 2.456x10^{-4} mm/year. PVB alone, however, appeared to have the highest corrosion rate at 9.330x10^{-1} mm/year. Therefore, the use PANI-T as additives in PVB has proven to enhance the protection of mild steel from corrosive electrolytes.
Table 1 Different electrochemical parameters obtained from the Tafel slope analysis after 30 days of immersion in 3.5% NaCl

<table>
<thead>
<tr>
<th>Samples</th>
<th>$E_{\text{corr}}$ (V)</th>
<th>$I_{\text{corr}}$ (Acm$^{-2}$)</th>
<th>$b_c$ (V/dec)</th>
<th>$b_a$ (V/dec)</th>
<th>$R_p$ (ohm)</th>
<th>Corrosion rate (mm/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PVB</td>
<td>-0.719</td>
<td>2.011x10$^{-7}$</td>
<td>0.179</td>
<td>0.163</td>
<td>2.000x10$^3$</td>
<td>9.330x10$^{-1}$</td>
</tr>
<tr>
<td>PVB+Pani-P</td>
<td>-0.596</td>
<td>1.936x10$^{-8}$</td>
<td>0.122</td>
<td>0.203</td>
<td>1.766x10$^5$</td>
<td>2.247x10$^{-4}$</td>
</tr>
<tr>
<td>PVB+Pani-T</td>
<td>-0.640</td>
<td>1.492x10$^{-8}$</td>
<td>0.106</td>
<td>0.142</td>
<td>1.395x10$^5$</td>
<td>1.732x10$^{-4}$</td>
</tr>
</tbody>
</table>

4. CONCLUSION

After 30 days of exposure to 3.5% NaCl, the coatings with PANI additives showed improvement in their protective abilities. Tube-shaped PANI has a higher surface area compared to a particle-shaped PANI, thus giving the lowest corrosion rate at 1.732x10$^{-4}$ mm/year.

5. ACKNOWLEDGEMENT

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6. REFERENCES


Local Outlier Detection Using Non-Parameter Sets in Taxicab GPS Trajectories
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ABSTRACT

Local outlier detection is fundamental to activity surveillance of taxicab drivers as they reveal the abnormal activities in GPS trajectories, e.g., empty loading, kidnapping and hijacking. A variety of algorithms of detecting outliers have been proposed, including clustering-based, density-based, and model-based approaches. To some extent, these methods are limited by several problems. Firstly, they are parameterized that heavily rely on users’ preconceived experience. Therefore, they usually achieve low detection efficiency and accuracy. Secondly, they fall short of supporting high-dimensional trajectory datasets. Thirdly, they do not differ the local outliers. In this paper we propose NPSLOD that is a non-parameter detection algorithm using the node density rank and reachable distance. To overcome the dataset sparsity, NPSLOD adopts the slide window strategy. We conduct experiments over real-world taxicabs GPS trajectories. Extensive experimental results show the superiority of the proposed scheme in terms of outlier detection accuracy and scalability.

Keywords: Local Outliers; GPS Trajectories; Density Rank; Reachable Distance; non-parameter sets

1. INTRODUCTION

With the rapid development of computer scientific technology and database technology, outlier detection has attracted increasing attention in urban computing. Outliers always refer to the data objects that are different from or inconsistent with the normal existing data [1], [2]. A well-known definition of "outlier" is given in [3]: "an observation which deviates so much from other observations as to arouse suspicions that it was generated by a different mechanism". This gives the general idea of an outlier and motivates many anomaly detection methods [4], [5]. At present, outliers’ detection has many important applications, such as fraud analysis of the telecommunication bill, credit card fraud detection, network attacks detection, pharmaceutical test, video surveillance, extreme weather prediction and so on.

However, because the actual application in the field of the complex dynamics of diversity and structure of the dataset, usually there exist Sample some of the data objects: they are relative to the entire global dataset does not show features from the group, but relative to the local neighborhood is abnormal, the objects we call local outliers. As shown in Fig. 1, node O2 is a local outlier, and O1 is a global outlier. Usually there exist Sample some of the data objects: they are relative to the entire global dataset does not show features from the group, but relative to the local neighborhood is abnormal, the objects we call local outliers. As following fig1 show O2 is a local outlier, and O1 is a global outlier.
Local outliers refer to the data object that its relative to its local neighborhood, or relative to its neighborhood density is far away from. For similar to figure 1 has multiple clustering (these clustering with different density distribution) data sets, if we can introduce the related concepts and definition of the local stray and using local outliers’ detection method based on density, can well find some local outliers such as o2 and similar the global outliers in o1.

Detecting large GPS outlier traces has been investigated for a number of different problems, and one interesting amongst these is using GPS traces to develop new ways to detect taxi driver activities and income. One kind of income anomaly could be caused by empty-loading ratio, which some passenger takes a taxi to suburban district or adjacent city, taxi driver just only empty-loading return. Especially in China passengers always take taxi along the road with wave. The traditional backward way of operating empty loading rate more than 40% in usually, cause a large rental car fuel consumption, driver’s income is low, city pollution is serious, a road resources and so on a series of problems. In Shenzhen, local news often report that some criminals aim to special taxi drivers who work in the middle of the night, many times take the taxi around the urban main road, and go to the lonely suburb, knife rob bullying the taxi driver. Consequently, GPS outlier detection is vital to taxi drivers that can significantly reduce the empty-loading ratio and avoid the happening of the robbery.

In our paper, we propose a local outlier detection method of non-parameters set named NPSLOD that aim to detect driving routes that are considered anomalous in the sense that they differ significantly from the normal. There exist a few challenges to achieve these objectives. First, we need to deal with a large number of GPS data because there are typically a large number of taxis in an urban area. Second, we need to efficiently analyse the temporal patterns of individual GPS traces as well as spatial distributions of these traces. Manually analysing hundreds of GPS traces is obviously unrealistic. So the data analysis component is based on our NPSLOD algorithm.

This paper is organized as follows. Section 2 overviews the related work. Section 3 analyses the real-world datasets aggregated from more than 10,000 taxis. Section 4 proposes our local outlier detection methods. Section 5 conducts the case study to illustrate the proposed scheme NPSLOD. Section 5 discusses the notion of locality in detail that is typical for spatial outlier
detection. Finally, Section 6 concludes the paper, summarizing the findings and pointing out the possible future research directions.

2. RELATED WORKS

In this section, we discuss previous work related to our study. Since we focus on local outlier detection with non-parameters in GPS trajectories, we briefly review previous work on outlier detection and GPS trajectories data analysis in this section.

In the past, many outlier detection methods have been proposed [6]. Typically, these existing approaches can be divided into four categories: distribution (statistical)-based clustering-based, density-based and model-based approaches [12], [15]. Statistical approaches [16]– [18] assume that the data follows some standard or predetermined distributions, and this type of approach aims to find the outliers which deviate from such distributions. The methods in this category always assumes the normal examples follow a certain type of distribution. Nevertheless, we cannot always have this kind of priori data distribution knowledge in practice, especially for high dimensional real datasets. [30]. For clustering-based approaches [7], [19], [20], they always conduct clustering-based techniques on the samples of data to characterize the local data behaviour. In general, the sub-clusters contain significantly less data points than other clusters, and are considered as outliers. For example, clustering techniques have been used to find anomaly in the intrusion detection domain [19]. In the work of [20], the clustering techniques iterative detect outliers to multidimensional data analysis in subspace. Since clustering based approaches are unsupervised without requiring any labelled training data, the performance of unsupervised outlier detection is limited.

There have been many recent works on mining large GPS traces. Liao, et al. [15] devise methods to predict a user’s mode of transportation and daily routine to provide reminders when needed, while [19,12] uncover taxi drivers operating patterns. Other works show how to predict the route and destination based on historical GPS traces [10,6,19], in addition to providing driving directions by exploiting taxi drivers knowledge [13]. GPS traces have also been used for uncovering interesting “hot-spots” for tourists [18,16], for passengers searching for vacant taxis [20], or for classifying the social functions of different regions in a city [11].

Anomaly detection has its roots in the more general problem of outlier detection. In most cases the data is static, rather than evolving over time. There are a number of different methods available for outlier detection, including supervised approaches [1], distance-based [2,9], density-based [3], model-based [8] and isolation-based methods [18].

Most of these methods identify anomalous trajectories based on their physical distance to “normal” clusters or their orientations. Based on the idea of isolating anomalies [19], Zhang et al. [16] devise a method which identifies trajectories as anomalous when they follow paths that are rare with respect to historical trajectories. Our paper adopts this characterization of anomalous trajectories but goes a step further: in addition to fast find local outlier, our method is able to specify which parts of the trajectory are anomalous. In comparison with some of the more sophisticated methods mentioned above, whose can’t find some local outlier, our method is fast and can be used in any shape data analysis.

3. DATASET CHARACTERISTICS

For our research, we make use of a large database of GPS logs from over 18000 taxis in Shenzhen, China. About 48 hours sustained taxis running data. Each log contains the latitude, longitude and taxi status (free/occupied), amongst other things. The logs were collected over a period between 2011-6-7 and 2011-6-8 at a sample rate of around one entry per minute and just including workday data and a weekend day data. So we can analysis the abnormal difference
between holiday and workday. In this work we will only make use of trajectories where the taxi is free, as one of the applications of this method is in aiding drivers to avoid empty-loading. We restrict our attention to the Shenzhen suburban district area, with longitude and latitude ranges of [113.46°E, 114.37°E] and [22.27°N, 22.52°N], respectively. A data item consists of 6 attributes: (ID; latitude; longitude; loaded; speed; time). ID is the identification number of the taxi from which the data is collected. Latitude and longitude define the global location of the taxi. Loaded is a boolean value indicating whether the taxi is loaded with passengers or not. Speed is simply the speed of the taxi at the time of collection. Time is the time stamp of the GPS data item.

After getting rid of unqualified data, the dataset contains a total of 1008266 records. After preprocessing of taxi GPS data statistics as following table 1 shows:

<table>
<thead>
<tr>
<th>Data</th>
<th>Week</th>
<th>Amount</th>
<th>Records</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011-6-7</td>
<td>Friday</td>
<td>16,877</td>
<td>9,608,206</td>
</tr>
<tr>
<td>2011-6-7</td>
<td>Saturday</td>
<td>17,013</td>
<td>12,287,798</td>
</tr>
</tbody>
</table>

we can calculate the taxi empty-loading ratio of per hour in June 7th and June 8th. The empty-loading ratio on June 8th show as following fig 2.

Figure 2. Taxi empty-loading ratio changes over time on holiday

1) Taxi empty-loading ratio in holiday

From the figure 2 we can be seen that holiday period of taxi empty-loading ratio is higher between 23:00 and 3:00. And all empty-loading ratio is above 0.5. Among them empty-loading ratio is highest between 23:00 and 24:00, it is above over 0.6; And the taxi empty-loading ratio low period of the day between 10:00 to 22:00, empty-loading ratio is less than 0.3. And the taxi empty-loading ratio of this period is relatively stable, the range is within 0.1. When taxi empty-loading ratio is low; It means the loading ratio is high. Therefore, the taxi period of high loading ratio is between 10:00 and 22:00.

The empty-loading ratio on June 7th show as following fig 3.
2) Taxi empty-loading ratio in workday

June 7th this Friday and workday, the taxi empty-loading ratio changes over time as shown in figure 3. And what makes us regret is that the dataset has not GPS data between 0:00 and 9:00 time period. From the figure we can be seen the taxi empty-loading ratio of workday is higher time period between 22:00 and 24:00, and the empty-loading ratio is above 0.6. Among them, the highest empty-loading ratio shows between 23:00 and 24:00, it is also above 0.6; The taxi empty-loading ratio lower time shows between 9:00 and 21:00, and it is less than 0.2, and empty-loading ratio fluctuations within 0.1. Among them, the lowest empty-loading ratio shows between 9:00 and 10:00. It also shows that the taxi loading ratio is higher between 9:00 and 21:00 on workday.

According to the sampling rate of the GPS data, the actual position of each taxi is updated every 10-20 seconds. Directly connecting these position updates with line segments would produce unnatural zigzagging trajectories. We use open map software to generate a plausible trajectory given the position samples.
Fig. 5. GPS Trajectories of sampling dataset

Since the original GPS position samples are not sufficiently dense, to avoid unrealistic undulations in the resulting spline, we choose an appropriate tension parameter. Afterwards, the approximate position of the taxi at any time can be computed using this spline. This generates more continuous and natural trajectories of the taxis and produces smoother vehicle movements. The actual look of the taxi trajectories interpolated can be found in Figure 5. Note that the length of the partial trajectory of a taxi is determined by a fixed-size causal time window. A longer partial trajectory indicates a higher average speed in the time window.

4. NPSLOD: NON-PARAMETERS SET LOCAL OUTLIERS DETECTION METHODS

Our algorithm has its basis in the assumptions that cluster centres are surrounded by neighbours with lower local density and that they are at a relatively large distance from any points with a higher local density. For each data point $i$, we compute two quantities: its local density $\rho_i$ and its distance $\delta_i$ from points of higher density. Both these quantities depend only on the distances $d_{ij}$ between data points, which are assumed to satisfy the triangular inequality. The complexity of the below procedure or algorithm is $O(N^2)$. $N$ is the total quantity of points. The algorithm is stated below:

**Step 1. Calculating the distance $D_{ij}$.**
We use Euclidean distance to calculate the distance of each two points in the raw dataset.

**Step 2. Determining the cutoff distance $d_c$.**
According to the user’s experience, the $d_c$ value usually gets between 0.01 and 0.02.

**Step 3. Calculating the local density rank of each point $\rho_i$.**
First of all, we find out with all points which the $i_{th}$ point distance less than $d_c$. Then we will count the number of these points.

**Step 4. Calculating the nearest neighbouring distance $\delta_i$.**
Note we must be ordered by the local density. Because the maximum local density points may have multiple, such as $\delta_i = \delta_j = \max \{ \delta_k \}$, and data points p1 and p2 will belong to the same cluster and distance between p1 and p2 is small by coincidence. Then we will get the equation by definition: $\delta_i = \max \{d_{ij}\}$, $\delta_j = \max \{d_{jk}\}$. If $\delta_i$ and $\delta_j$ are same large, then these two data points will be selected as the clustering centre, which will be split into two clusters of a cluster. So we must be ordered by local density to avoid this problem. Because after descending order by local density value of the same data points, we still have order of p1 and p2, so that only the p1 and p2 out in front of the data points as the cluster centre.

**Step 5. Selecting the cluster center.**
We use the local density $\rho_i$ and the nearest neighbouring distance $\delta_i$ to draw the decision graph. Then we can select the cluster center.

**Step 6. Classifying the data points of non-cluster center.**
All points of non-cluster centre belong to the same class which is larger than its local density and the nearest neighbor.

**Step 7. Separate the cluster core or cluster halo.**
If the number of clusters is greater than 1, the data points of each cluster separate cluster core or cluster halo. Firstly, we will define a boundary density for each cluster and initialized to 0. Secondly, we make an upper bound of local density for each of the clusters. Finally, we will compare the local density of each point with the density boundary of its cluster. If the point...
local density is smaller than the boundary point density, then the point is the cluster halo. Otherwise the point is belonging to the cluster core.

**Step 8. Calculating the mean value of the nearest neighbouring distance for each cluster \( \bar{d} \).**

We will not calculate the highest destiny point in every cluster. And we will calculate the standard deviation of each cluster.

**Step 9. Finding the nearest neighbor point.**

From the second point, traversal all point. Assumption there is a point P, \( \text{neigh}(P) \) is the point that it’s destiny is larger than point P and it’s the nearest neighbor point of P.

**Step 10. Detecting the abnormal point with 2\( \Delta \) rule.**

We will Judge \( |\delta_p - \bar{d}| \) is or isn't larger than \( 2\Delta \), If \( |\delta_p - \bar{d}| < 2\Delta \), then point P and point \( \text{neigh}(P) \) belong to the same class (outlier or cluster point). If \( |\delta_p - \bar{d}| > 2\Delta \), point P maybe not an outlier, as the following figure2 show, Red points are the Outlier by step 10.

5. Conclusion

In the paper we propose NPSLOD method. Firstly, the method can deal with a large number of any shape data because detect the local outlier with the point local density. Secondly, the method can analyze the high dimensional data well as spatial distributions of these trajectories; Finally, the method use the non-parameter set to detect local outlier with unsupervised. Analysis the GPS trajectories we can get the conclusions: Residents of Huizhou, Guangdong Province often go to Shenzhen shopping or travel, but cannot get sup-port from public transport at nighttime. Whereas many Hong Kong employers work in Hong Kong daily but live in Shenzhen at night. These results show the accuracy of our algorithm applied on the dataset GPS trajectories for finding the abnormal trajectories using NPSLOD algorithm using our selected four features in taxi GPS trajectories.

6. ACKNOWLEDGEMENT

We thank for Shenzhen Bureau of Transportation provided Part of the data used in the artic....

7. REFERENCES


EFFECT OF WATER SAVING TECHNOLOGIES ON GROWTH, YIELD AND WATER PRODUCTIVITY OF LOWLAND RICE VARIETY

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ABSTRACT

Background: alternate ways with less water requirements is crucial for sustainable rice productivity in the context of decreasing irrigation water availability which is further aggravated by climate change. Direct seeding method of cultivation (DS either dry [DDS] or wet [WDS]) and alternate wetting and drying (AWD) are among such ways which could significantly contribute in decreasing water requirement of rice without a significant reduction in yield thus increasing water productivity and water use efficiency.

Methodology: To investigate the performance of different threshold levels of AWD under different cultivation methods for a popular lowland Thai rice variety (Pathumthani 1), the current study was designed. Treatments for this study included, three cultivation methods (dry direct seeding [DDS], wet direct seeding [WDS] and transplanting [TP]) under four soil moisture levels of 0, −5, −15 and −30 kPa (maintained through permanently installed tensiometers). Growth, yield components, grain yield and water saving potential of different moisture levels were determined.

Results: Highest water saving potential of about 62\% compared with traditional continuous flooding method was recorded at −30 kPa for DDS method which was reduced by 24–82\% for other soil moisture treatments. At severe moisture stress of −30 kPa, DDS method had higher grain yield which was 24\% higher than TP method whereas the difference between WDS and TP was nonsignificant at moisture conditions of 0 and −30 kPa. More unfilled grains were recorded at −30 kPa under DDS method of cultivation.

Conclusion: DDS method was found equally suitable with better results. The threshold level of AWD could be −30 kPa for soil and weather conditions comparable to the current study for its high-water productivity compared to yield reduction.

Keywords: Alternate wetting and drying, Dry direct seeding, Kilopascal, Water productivity, Wet direct seeding

1. INTRODUCTION

Water resources are consistently declining leading towards a competition for this precious natural resource and because of this fact the current century is considered as the century of water. Agricultural water availability is steadily decreasing due to multiple reasons such as competition among different economic sectors, reduced investment in irrigation infrastructure, water quality deterioration due to pollution and alarming population increase (Datta et al., 2017; Rijsberman, 2006). In most of the Asian countries, per capita availability of water has reduced by 40–60\% between 1955 and 1990, and is estimated to decline further by 15–54\% over the next 35 years (Gleick, 1993). Agricultural production needs to be doubled in the twenty first century to feed the growing global population with a challenge of decreasing water availability.
for agricultural purposes (Foley et al., 2011). Finding alternate ways with less water demand for agricultural purposes is therefore needed to maintain productivity and sustainability. Rice (*Oryza Sativa* L.) is the main staple food crop for about one third of the global population most of which are poor and thus it is critically important for global food security (Ullah et al., 2017b). Rice is not an exclusive hydrophyte but its cultivation under inundated conditions has been in practice since long. On average, rice production requires double the amount of water in each unit of production than any other cereal crop (Maclean et al., 2002). Asia is particularly important where rice is a primary source of caloric intake for most of the poor people, because of alarming increase in population, poverty and susceptibility of its major rice producing areas to climate change. By 2025, 15–20 million ha of irrigated rice field will suffer with some degree of water scarcity (Tuong and Bouman, 2003). Because of increasing shortage of freshwater resources for irrigated agriculture and rising demand of food around the world, in the future, it will be essential to find the ways to produce more food with less amount of water. Since, more irrigated land is devoted to rice production than any other crops in the world, the wastage of the water resource in the rice field should be minimized (IRRI, 2003). Around the world 93 million ha of irrigated lowland rice provides 75% of the world’s rice production. Therefore, increasing water scarcity threatens the sustainability of rice production.

In Asian region water use efficiency (WUE) of rice is very low, especially for small farmers who could contribute 75% of the production in next decade (Molden, 2007). The yield gap in this area is very high and this is a general belief that this gap could be narrowed through efficient use of resources and increasing WUE of rice. For this purpose, a number of rice production management strategies have been designed, some of which are closely related. Among these techniques most common are, alternate wetting and drying (AWD) (Belder et al., 2004), integrated crop management, aerobic rice culture (Bouman and Tuong, 2001), use of controlled release fertilizers (Shoji and Kanno, 1994) and system of rice intensification (SRI) (Stoop et al., 2002). Dry direct seeding is also a strategy for efficient water management. This process is very useful in reducing water loss during land preparation stage. Being a high water demanding crop, a slight decrease in water requirement for rice cultivation would save a huge amount of water which could be used for other economic sectors or more area could be brought under cultivation. A major shift has been observed in Asia towards direct seeding cultivation due to increasing water scarcity and high labour wages (Datta et al., 2017; Ullah et al., 2017a). Farmers in the areas with sufficient irrigation water and labour available prefers the traditional transplanting method of cultivation where fields remain flooded for most of the growth period but areas with shortage of water and labour generally prefers water saving cultivation techniques. The dire predictions for 2025 indicates a serious problem of water shortage for rice cultivation in most of the rice growing areas and Thailand is no exception. On the other hand, most of the popularly grown rice varieties are adopted for lowland conditions and evaluation of the performance of such varieties under water saving cultivation techniques is critically important. For this purpose, the current study was designed to evaluate the performance of popularly grown Pathumthani 1 rice variety under different cultivation methods and different thresholds of alternate wetting and drying water regime.
2. METHODS

Experiments were conducted in a polyhouse at the Asian Institute of Technology, Bangkok, Thailand (latitude 14°01'12"N and longitude 100°31'12"E), during the rice growing season of 2016-2017. The experiments were laid out in a completely randomized design (CRD) with four replications. Plants were grown in a naturally lit polyhouse where the temperature fluctuated between 30 and 35. Seeds of Pathumthani 1 rice variety were collected from Pathum Thani Rice Research Centre, Pathum Thani Province, Thailand.

Seeds were sown on nursery trays for transplanting method. For dry direct seeding dry seed were directly sown in to the dry soil in each pot, whereas in wet direct seeding pre-germinated seeds were sown in the puddled soil while 15 days old seedlings were transplanted into the pots at the rate of three seeds pot$^{-1}$ which was later thin into single seedling pot$^{-1}$ after establishment. Soil analysis was done before sowing, which showed that the experimental soil was moderate acidic with pH of 5.6 and classified as a clay loam soil according to USDA (Table 1). It was adequate in Phosphorus (P), potassium (K) and was deficient in organic matter and nitrogen mineral (N). A total of 48 pots (27cm height with 14 cm top and 9 cm bottom diameter) were used for this study. The study comprised of one rice variety (Pathumthani1), three cultivation method (dry direct seeding [DDS], wet direct seeding [WDS] and transplanting [TP]) and four soil moisture regimes (0, −5, −15 and −30 kPa). Soil moisture was monitored with the help of permanently installed tensiometers (Model 2725ARL Jet Fill Tensiometer, Soilmoisture Equipment Corp., CA, USA). Each pot was filled with 6.5 kg of soil and NPK(16-16-16) was applied at the rate of 0.7 g pot$^{-1}$ as basal and urea (46-0-0) was used in two split doses as top dress at maximum tillering and panicle initiation stages.

Table 1: Physiochemical properties and Texture of the experimental soil

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Test Results</th>
<th>Soil texture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organic matter</td>
<td>1.9%</td>
<td>Sand 29.0 %</td>
</tr>
<tr>
<td>Available Phosphorus</td>
<td>90.27 mg/kg</td>
<td>Silt 40.9 %</td>
</tr>
<tr>
<td>Total Nitrogen (Total N)</td>
<td>&lt;0.50 g/100g</td>
<td>Clay 30.1 %</td>
</tr>
<tr>
<td>Exchangeable Calcium</td>
<td>0.39 g/100g</td>
<td></td>
</tr>
<tr>
<td>Exchangeable Magnesium</td>
<td>436.59 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Exchangeable Potassium</td>
<td>452.39 mg/kg</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>5.40</td>
<td></td>
</tr>
</tbody>
</table>

2.1. Data Collection

Data on different growth parameters, yield components, grain yield and water saving potential of different method was collected at harvest.

2.2. Data analysis

A completely randomized design with four replications was used for the experiment. The experiment was conducted twice. The data represent the average of the two experiments, as there was no time by treatment interaction. Data were analyzed using the analysis of variance (ANOVA) function of IRRISTAT 5.0 (IRRI 2005). Means for significant treatment effects were separated by Fisher’s protected least significant difference (LSD) test at p < 0.05. The treatment combination means presented for a variable are based on the highest order of factorial combination that is significant in the ANOVA.

3. RESULTS AND DISCUSSION

The two-way interaction between cultivation method and soil moisture regime was found significant (p < 0.05) for number of productive tiller plant$^{-1}$ (Fig. 1). DDS method produced higher number of productive tiller irrespective of soil moisture regime and TP produced lowest number of productive tillers across all moisture regimes. At 0 kPa, DDS had significantly higher number of productive tillers (25) compared with WDS (22) and TP (17). Highest difference was observed at −5 kPa where DDS had 38% and 71% more number of productive tillers compared with WDS and TP respectively and WDS had 24% more productive tillers compared with TP at the same moisture regime. DDS had maximum
number of productive tillers at $-5 \text{ kPa}$ which was 16%, 12% and 16% more than 0, $-15$ and $-30 \text{ kPa}$ respectively. Number of productive tillers under WDS and TP was not affected by soil moisture regime.

Fig. 1: Number of productive tiller of Pathumthani 1 rice variety as affected by cultivation method and different soil moisture regimes, DDS, dry direct seeding; WDS, wet direct seeding; TP, Transplanting; kPa, kilopascal; Bars with same letters are not significantly different at $p < 0.05$

Number of unfilled grains panicle$^{-1}$ was highly significantly ($p < 0.01$) affected by the two way interaction between cultivation method and soil moisture regime (Fig. 2). More unfilled grains were observed under DDS at 0 (36) and $-30 \text{ kPa}$ (46) which was statistically at par with WDS and 80% higher than TP at 0 kPa and 28% and 31% higher than WDS and TP respectively at $-30 \text{ kPa}$. All cultivation methods had statistically similar number of unfilled grains at $-5$ and $-15 \text{ kPa}$. DDS had maximum number of unfilled grains at $-30 \text{ kPa}$ (46) which was 28%, 100% and 130% higher than 0, $-5$ and $-15 \text{ kPa}$ respectively. The same difference under WDS was 57% and 71% at $-5$ and $-15 \text{ kPa}$ respectively compared with $-30 \text{ kPa}$ and under TP was 75%, 40% and 46% at 0, $-5$ and $-15 \text{ kPa}$ respectively compared with $-30 \text{ kPa}$.

Fig. 2: Unfilled grains pot$^{-1}$ of Pathumthani 1, rice variety as affected by cultivation method and different soil moisture regimes, DDS, dry direct seeding; WDS, wet direct seeding; TP, Transplanting; kPa, kilopascal; Bars with same letters are not significantly different at $p < 0.05$

1000 grain weight was significantly ($p < 0.05$) affected by the two way interaction between cultivation method and soil moisture regime and the individual effect of soil moisture regimes (Fig. 3a and 3b). No significant difference was found among the three cultivation methods at 0 kPa and the same was also true for DDS and WDS across all soil moisture regimes (Fig. 3a). At $-5$ and $-15 \text{ kPa}$, DDS and WDS had
11% and 14% more 1000 grain weight respectively compared with TP. At −30 kPa, WDS had 14% more 1000 grain weight compared with TP. The effect of decreasing soil moisture on DDS and WDS was not significant up to −15 kPa but severe moisture stress of −30 kPa caused a reduction of 25%, 23% and 23% in 1000 grain weight compared with 0, −5 and −15 kPa under DDS and 20%, 22% and 22% under WDS respectively. Maximum 1000 grain weight under TP was observed at 0 kPa which was reduced by 10%, 10% and 29% at −5, −15 and −30 kPa respectively. The individual effect of soil moisture was also significant (p < 0.05) (Fig 3b) where 1000 grain weight was found unaffected up to −5 kPa but 6% and 10% reduction was observed at −15 and −30 kPa respectively compared with 0 and −5 kPa.

Fig. 3: 1000 grain weight of Pathumthani 1 rice variety as affected by cultivation method and different soil moisture regimes, DDS, dry direct seeding; WDS, wet direct seeding; TP, Transplanting; kPa, kilopascal; Bars with same letters are not significantly different at p < 0.05

Grain yield was significantly (p < 0.05) affected by the two way interaction between cultivation method and soil moisture regime (Fig 4a) and the individual effect of soil moisture regime (Fig. 4b). More grain yield was recorded under DDS across all soil moisture regimes. At 0 kPa, DDS had 17% more grain yield compared with TP, while the same difference at −5, −15 and −30 kPa was 51%, 39% and 24% respectively. WDS and TP had statistically similar grain yield at 0 and −30 kPa; however, WDS had 29% and 18% more grain yield compared with TP at −5 and −15 kPa. Decreasing soil moisture decreased grain yield across all cultivation methods, but DDS had maximum grain yield at −5 kPa which was statistically similar with 0 and −15 kPa but 30% higher than −30 kPa. Grain yield under WDS remained statistically similar up to −15 kPa but severe moisture stress of −30 kPa caused a reduction of 17% in grain yield compared with −5 kPa. Deficient moisture stress caused a reduction of 23%, 23% and 28% at −5, −15 and −30 kPa respectively compared with 0 kPa under TP (Fig. 4a). Among the four moisture levels, highest grain yield was observed at −5 kPa, which was reduced by 5%, 6% and 15% at 0, −15 and −30 kPa respectively (Fig. 4b).
Fig. 4: Grain yield pot\(^{-1}\) of Pathumthani 1 rice variety as affected by cultivation method and different soil moisture regimes, DDS, dry direct seeding; WDS, wet direct seeding; TP, Transplanting; kPa, kilopascal; Bars with same letters are not significantly different at \( p < 0.05 \)

A significant difference was observed among different moisture regimes for water saving potential compared with traditional continuous flooding method (Fig. 5). The soil moisture regime of 0 kPa where soil was kept moist without standing water helps in water saving up to 11% compared with flooded conditions while –5, –15 and –30 kPa saved 38%, 47% and 62% water respectively compared with flooded conditions.

Fig. 5: Water saving potential of different soil moisture regimes relative to continuous flooding method. kPa, kilopascal; Bars with same letters are not significantly different at \( p < 0.05 \)

AWD is a water-efficient technology to cope with increasing water scarcity for agricultural purposes, especially for rice (Datta et al., 2017). Under this system, water (~2–5 cm) is provided to the field at an interval of 2–7 days depending on soil type and environment followed by disappearance of ponded water from the surface of soil (Tuong & Bouman, 2003). Proper use of this technology can help save water up to 40% along with an indirect increase in farmers’ income through reduced expenses in water pumping and fuels (Lampayan et al., 2015). Here in this study we observed that this method could be safely applied up to a threshold level of –30 kPa without a significant reduction in grain yield. DDS in
increasingly becoming popular due to low labour and water requirements (Ullah et al. 2017a) and a major shift has been observed from traditional transplanting (TP) to DDS method in recent years in many parts of Asia (Ullah et al., 2017a). The major reasons for this shift include (i) decreasing water availability for irrigation, (ii) labour shortage and increased wage, (iii) recent developments in DS technology, (iv) adverse effects of puddling on soil physiochemical properties and other non-rice crops and (v) growing interest in conservation agriculture (Kumar & Ladha, 2011). The better results observed for DDS during the current study is in close agreement with these researchers. Similarly, more unfilled grains were observed for decreasing soil moisture which is also in close agreement with the other studies and Datta et al. (2017) states that more number of unfilled grains is a typical symptom of water deficit stress in rice. The current results are also in close agreement with Zubaer et al. (2007) who reported that number of unfilled grain was increased with reduced soil moisture levels. Hossain (2001) who conducted a pot experiment under different soil moisture regimes and observed that the number of unfilled grains per panicle was increased in decreasing soil moisture levels. Yambo and Ingram (1988) also reported that water stress during reproductive stage increases sterility percentage. Begum (1990) observed that water stress after flowering increased in the number of empty spikelets. Our results for 1000 grain weight are similar with RRDI (1999) who found that water stress during grain filling stage decreased grain weight. Toole et al. (1997) also reported that water stress during grain filling stage reduced the weight of individual grain. Begum (1990) concluded that water stress after flowering stage decreased the individual grain weight. Tsuda and Takami (1991) stated that water stress reduced grain weight. Zubaer et al. (2007) reported that 1000 grain weight was decreased with reduced soil moisture levels. Islam (1994) reported that thousand grain weight was reduced by water stress. For soils comparable to current study, a possible maximum limit for safe AWD could be –30 kPa without considerable loss in grain yield. Reduced water input and high water productivity are usually credited to reduced seepage and percolation (Cabangon et al., 2004) along with reduced evapotranspiration. However, seepage and percolation are strongly linked with soil texture and the rates are high for lighter soils compared with heavy soils (Sharma, 1989). Thus, to get maximum benefits of AWD, the optimum threshold should be site specific mainly based on soil type and texture.

4. CONCLUSION

Water saving cultivation method (DDS or WDS) could be safely recommended for the tested variety under soil and weather conditions comparable to the current study. DDS showed better results under all moisture conditions and could be adopted as water saving cultivation technique. Application of different soil moisture regime was helpful in saving significant amount of water compared with traditional flooding conditions with some penalty in terms of yield reduction. For soil and weather conditions comparable to the current study the threshold level of –30 kPa could be recommended with some degree of loss in grain yield. Evaluation of the current results under field condition would be helpful to evaluate and validate the current results.

5. ACKNOWLEDGEMENT

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6. REFERENCES


ABSTRACT

Technology is quickly changing the way we work and live, and the pace of change is sure to accelerate in the coming decades. One of the most significant technological innovations of the last ten years has been the mobile phone. In particular, clever entrepreneurs seized on new possibilities created by mobile phone technology to address social needs that were not being met by existing resources. Companies like Uber, Airbnb, Go-Jek and Alibaba are already changing the way we conduct business, underwrite loans, find housing and even get around town. Technological innovation will continue to profoundly alter these sectors and others.

This paper will discuss the impact of mobile phone technology in three areas of the Indonesian economy: transportation, mobile banking and peer-to-peer lending. Applications like Go-Jek have ingeniously leveraged the ubiquity of mobile phones to address a pressing transportation challenge: efficiently matching a surplus of idle motorbike drivers with customers at fixed, affordable rates. They are now expanding into digital payment services, seizing the opportunity to expand access to banking services to tens of millions of rural and unbanked poor throughout the archipelago. There is also a burgeoning market demand for credit from small and medium sized businesses which have traditionally been overlooked in Indonesia, and technology is presenting a way to meet that demand.

The paper will look at how technology, fused with innovative social entrepreneurship, has facilitated the development of services that address specific social needs not being met by existing resources. Of particular interest is that although these are private companies interested in generating profits, their services are also addressing social needs by helping to alleviate traffic and expand access to financial resources. The way in which technology has facilitated this mutually beneficial relationship between private business and society provides an interesting clue about what the future of work in Indonesia may look like.

Keywords: Finance; Indonesia; Innovation; Technology; Transportation

Introduction

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The advent of the mobile phone has changed life as we know it, but often not in ways that have been easy to predict. This is the great promise of technological innovation. It provides opportunities for entrepreneurs and visionaries to address un-met social and market needs in ways that nobody imagined just a few years earlier. As the pace of progress intensifies, new technologies will increasingly be used in innovative ways to address social problems while creating whole new markets for services that previously didn’t exist.

This mutually beneficial dynamic between technology, society and private business is exemplified by the way mobile phone technology is changing the transportation and finance industries in Indonesia. This paper will detail the ways that innovative start-ups leveraged the previously untapped potential of mobile networks to address social needs that were not being met by conventional resources. It will stress the importance of adopting a bottom-up, organic approach – one that seeks to address specific social problems embedded in society. This suggests that technology is empowering the next generation of social entrepreneurs to develop need-based solutions, rather than relying on a one-size top-down approach.

The paper will begin by discussing the academic consensus on the benefits of increased access to high speed internet and mobile phone penetration. It will then identify some puzzles that have yet to be answered – namely, what the mechanisms driving those benefits are and why the impact of digital technology have been unevenly distributed. These puzzles suggest that technology alone is not the answer; it must be complemented by other factors. The paper will explore the development and success of Go-Jek and other mobile apps in the Indonesian transportation and finance sectors in order to tease out what some of those factors might be. It will conclude with a discussion of the findings and what they portend for the future of work and technology.

**Conceptual Framework**

Technology is developing at such a rapid pace that old innovations have often been supplanted by new ones before the original invention had even been properly understood. It was only within the last ten years that an academic consensus began to form on the positive economic and social impact of access to high speed broadband internet. In 2012 the World Bank published a report finding that a 10% increase in broadband coverage (where broadband was defined as access to high speed, but not necessarily wireless, internet) correlated with a 1.35% increase in GDP in developing countries (World Bank 2012).

Previous work had already established that investment in broadband networks boosted economic growth in Germany (Katz, et al, 2010) and in OECD countries in general (Koutroumpis 2009). Around 2012, studies also began to tease out the economic benefit of mobile phone penetration. A background paper for the aforementioned World Bank report found that a 10% increase in mobile penetration boosted productivity by 4.2% (Deloitte 2012). This link was especially acute in developing economies. A study in rural Peru found that mobile phone penetration increased consumption by 11% and reduced poverty by 8% (Beuermann et al, 2012).

By 2012 the literature supported the general idea that faster broadband networks and mobile penetration could increase domestic consumption, boost GDP growth and decrease poverty, but there was not yet widespread recognition of the opportunities that could be seized by piggy-backing high speed internet on mobile phone networks. In a piece examining the World Bank report findings, Colin Scott (2012) wrote that it was still necessary to test “the extent to which broadband technologies are economically preferable to narrowband technologies such as cell phones or dial-up.” What is striking about this is that the author makes a distinction between broadband internet and cell phones, treating them as separate
variables. The iPhone had been released five years earlier, but it is telling that there was still a broad failure to grasp the potential of marrying broadband internet and cell phones.

In the years between 2012 and 2017, that potential has become impossible to ignore, especially in developing countries. Economies that lack well developed transportation and energy infrastructure, or that suffer from a deficit of social capital, often face challenges in producing and consuming services that are energy-intensive, require long-distance transportation or need highly trained professionals. A 2015 report from Brookings notes that “in today’s modern economy we are witnessing a rapidly expanding array of services with mobile technologies as their backbone. High mobile penetration gives developing economies the capacity to produce and consume” the kinds of services that were previously limited by the challenges of development (Brookings 2015).

The data therefore supports the idea that faster internet coupled with greater mobile penetration, especially in developing economies, is spurring growth and boosting productivity. Less clear is the mechanisms by which this is occurring. One explanation is that the ubiquity of mobile technology is providing hundreds of millions of previously un-banked people, who are often poor and rural, with access to transaction settlement mechanisms, loans and other banking services from which they have historically been excluded (Mishra and Bisht 2013; Singh 2012; Kirui et al, 2013). Access to these kinds of basic financial services has a positive impact on life expectancy, per capita income and literacy (Kodan 2013).

But simply expanding access to digital technology may not be sufficient in and of itself to drive sustainable growth and development. According to the World Bank’s 2016 Digital Dividends Report, although digital technologies are driving change around the world, the aggregate impact of that change has been unevenly distributed, lagging far behind in some places. The report argues that the main mechanisms by which digital technology drives development are “efficiency, inclusion and innovation.” (World Bank 2016) For digital technology to drive sustainable growth, all three of these areas must complement one another.

It is clear that smart phones make access to some basic services more inclusive and efficient. Peer to peer lending platforms or ride-hailing apps are able to match demand with supply while avoiding costly and inefficient intermediaries like banks and taxi companies. Good regulatory architecture is also important in supporting early-stage innovation without strangling growth (Guild 2017). The focus of this paper, however, is how social entrepreneurs are leveraging technology in innovative ways to address specific social needs not being met by existing resources. Fusing the right idea with the right technology is an important part of the process, and one that is not well understood.

Digital technology, after all, is only a blunt tool – the breakthrough moment is when someone figures out how to leverage that technology to design a service that the market may not even know it needs. In his piece examining the 2012 World Bank report on economic growth and broadband, Colin Scott failed to see the potential of marrying cell phones and broadband, but he was shrewdly prescient about something else, writing that technology “has the potential to empower individuals to drive innovations of products based on their own needs.” (Emphasis mine). This kind of bottom-up innovation is one of the great equalizing promises of digital technology, a promise that has yet to be fulfilled on a mass scale but which is beginning to show signs that it might soon be.

**Transportation**

The biggest Indonesian tech success story has been the mobile app Go-Jek, the first Indonesian start-up to reach a $1 billion valuation (Lee 2017). It is a ride-hailing app that has expanded to most major cities
in Indonesia, has hundreds of thousands of drivers, billions in venture capital backing it and has been aggressively expanding into everything from food delivery to massages to digital payments. Jakarta businesses that have joined the platform have seen revenue increase from between 15-30% (Suroyo 2017). The drivers who sign up receive training and insurance, and can earn up to three times what other motorbike taxi drivers who are not on the app earn (Ford 2016). Fortune magazine placed Go-Jek 17th on this year’s Change the World List, which ranks companies based on how well they balance innovation, profits and positive social impact (Leaf 2017). In the traffic-clogged streets of Indonesia, an app that matches idle drivers with riders at affordable prices is a net benefit for all parties.

How did Go-Jek develop a model so well suited for the particular challenges of Indonesia’s urban environments and scale it up so quickly? The answer to the first question lies in the way Nadiem Makarim, the firm’s founder, tackled the issue. He started with a straightforward, ground-up approach, simply talking to motorcycle taxi drivers on the streets of Jakarta and finding out what they liked and didn’t like about their jobs. In doing so, he identified a major mismatch between the supply of motorbike taxis and demand from riders. Motorcycle taxi drivers were often idle for much of the day, putting in 14-hours but only booking five rides per day (Porter 2016). To compensate, freelance drivers charged higher prices that often involved inefficient and irritating rounds of haggling. Makarim realized if idle drivers could be grouped together under a centralized system (originally a sort-of call centre) that matched them with clients, they could book more rides at lower cost and still make more money than before. This was the innovative element, perfectly suited for the streets of Jakarta. But the company didn’t really take off until the technology caught up with the idea and it could be rapidly scaled through a mobile phone app.

When the Go-Jek app launched in 2015, that is when the company’s growth took off and it started gaining serious financial backing from firms like KKR and Warburg Pincus (Millward 2016). But it was the local expertise and bottom-up approach that helped Go-Jek to consolidate market share in Indonesia against bigger, better capitalized foreign rivals like Uber. As a home-grown company, Go-Jek was better suited to navigate Indonesia’s confusing regulatory environment (Wailes 2016). In 2015, struggling to find the proper regulatory balance for the burgeoning service, the Minister of Transportation banned all ride-hailing apps; the ban lasted for 12 hours before a social media backlash and the intervention of President Joko Widido forced it to be lifted (Russell 2015). When the leading taxi company in the country, Blue Bird, began to throw its weight against Go-Jek, it was quickly cut into a partnership that shrewdly aligned its interests with those of the app (Bohang 2017). It is unlikely a foreign company like Uber, without local contacts, would have been able to make a similar deal so quickly.

This points to the importance of so-called “analog complements” to digital technology in order to maximize the potential of technology to drive sustainable growth and development. Increasing penetration of digital technology, and specifically smartphones, is a necessary but insufficient explanation to account for the changes taking place in economies like Indonesia’s. An equally critical consideration is the fusion of that technology with an innovation that directly addresses an un-met social or market need. In the case of Go-Jek this occurred when a mobile phone application was launched that matched idle drivers with people needing rides at affordable prices in a city that is notorious for its traffic jams.

Sometimes these innovations can be imposed top-down and scaled (which is the model Uber has been applying throughout the world), but such a template can encounter problems when it runs afoul of local regulators or fails to account for local market idiosyncrasies (as happened to Uber recently in London, 5). A lighter regulatory framework has since been advanced which allows ride-hailing apps like Go-Jek to operate as long as they conform to a minimum level of technical and safety standards.

5 A lighter regulatory framework has since been advanced which allows ride-hailing apps like Go-Jek to operate as long as they conform to a minimum level of technical and safety standards.
where its operating permit was revoked by the transport authority. By knowing its own market intimately, Go-Jek has been able to focus on developing services that specifically fill un-met needs in the market.

“For Go-Jek it’s quite simple - we focus on the pain points that people experience in fast-growing cities,” Piotr Jakubowsky, Go-Jek’s director of marketing, has been quoted as saying. “The development of the ecosystem happens organically, for example when Go-Jek first launched the application in January 2015 we had three services - transport, courier and shopping.” (Lim 2017). Allowing a digital ecosystem to develop organically, driven by entrepreneurs designing products and services based on need, is an important clue to what economies in the future will look like and how technology will shape the way they function.

**Digital Finance**

Just as millions of consumers in Jakarta had been waiting, perhaps without realizing it, for a ride-hailing app that could help alleviate traffic congestion, millions more Indonesians are also waiting for digital banking services that will expand their access to basic financial resources. World Bank data from 2014 shows that only 36% of Indonesian adults had a bank account, while only 13% had availed themselves of formal lending facilities (World Bank 2014). As mentioned above, this is an obstacle to sustainable economic growth, as access to bank accounts and credit have a positive impact on development. A 2014 report by Deloitte estimated that a 20% increase in financial inclusion would create 1.7 million additional jobs in Indonesia (Deloitte 2015).

Banks, NGOs and the government have been struggling for years to devise a way to broaden financial inclusion in an archipelagic nation where millions of people live in remote areas served by poor infrastructure networks and lack access to retail bank branches. Increasingly, it seems that mobile phone penetration and digital finance can provide the answer. A Pricewaterhouse survey of banks in Indonesia conducted in 2017 found that nearly all banks, and especially local banks which are most closely attuned to the needs of domestic consumers, believe technology will be the most significant driver of change in banking over the next 3-5 years. Nearly all the survey respondents indicated they are investing heavily in e-banking, with half saying it was their #1 investment priority (PWC 2017).

This trend is being driven by the rapidly changing face of the digital economy, which is providing millions of un-banked people access to resources from which they were previously excluded. In 2013, Malaysian-owned CIMB first pioneered a digital service in Indonesia that provided a “cellular phone-based bank account through which customers [could] make banking transactions on their phones… [The service was] not bank-based, which enabled non-customers to activate their mobile numbers and effectively turn their phones into e-wallets, allowing them to carry out transfers, payments and withdrawals without having an ATM card or even a bank account.” (Wirdana 2015). While other large banks have struggled to adapt to digital payment services, social entrepreneurs like Go-Jek are already out-flanking them in the development of mobile payment apps which are primed to be a major growth area in Indonesia and Southeast Asia.

Go-Jek originally developed its cashless Go-Pay service so that customers could pay for rides and food through the app without needing cash. They are now offering Go-Pay as a separate service for cashless payments at online and off-line merchants. They are using their existing market penetration to expand the digital payment service, moving beyond the original scope and vision of the app and into the promotion of financial inclusion. “There is no rocket science to the adoption of technology,” founder Nadiem Makrim was quoted saying. “The key is to offer a significant improvement as well as
convenience and speed to the unbanked by targeting use cases and embedding yourself into their daily life.” (Marzuki 2017). Again, the service is being tailored to address specific market needs in Indonesia – and other developing economies in Southeast Asia where millions of unbanked have placed a check on economic growth.

Major investors like Ant Financial, Tencent, Grab and Traveloka are now racing to purchase e-commerce and mobile payment companies in Indonesia, suggesting they are anticipating the sector to grow rapidly in the future (Purnell 2017). According to a report from Google and Temasek, economic growth in Indonesia may be nearing a tipping point where discretionary consumer spending is about to take off. They estimate the internet economy in Southeast Asia will reach $200 billion by 2025 (Choudhury 2016). If Indonesian consumers, many of whom have mobile phones but not necessarily bank accounts or debit cards, are about to have more disposable income for discretionary spending, cashless digital transaction services are likely to see a huge boom in the coming decade. After all, there is no reason why doing your banking at a traditional brick and mortar branch is preferable to conducting it via banking apps and e-commerce platforms. Tech start-ups that use technology to innovate solutions catering to the demands and needs of this particular market are therefore likely to reap large rewards.

A similar sector that is primed for growth in Indonesia is in finance and lending. Small and medium sized enterprises have long had a difficult time securing credit from traditional sources like banks. They often have spotty credit histories, lack collateral or are simply overlooked by banks and financial institutions that are tightly tied to the state and tend to look out for the interests of well-connected stakeholders. Peer-to-peer lending platforms offer a technological solution that caters to this underserved market (Putra 2017). These platforms pool capital from individual investors and make loans to small businesses. In countries like Indonesia, where capital is often seeking a better return than that offered by traditional banks, this is an instructive example of technology matching idle capital with the consumers who need it. Furthermore, investment in small and medium businesses helps drive balanced economic growth, so peer-to-peer lending platforms are serving an important economic function, one not being adequately addressed by existing resources.

Currently the market for such services is small, but the potential for growth is big. Digital finance company InvestTree, which recently cleared a regulatory hurdle to become an officially licensed financial platform, has received a fresh round of investment from China (Maheshwari 2017) while Japanese investors have placed $50 million into similar services. The regulatory environment in Indonesia is relatively favourable for these kind of digital financing solutions, so we should expect to see social entrepreneurs, tech start-ups and other venture capitalists begin to pile on shortly (Hynes 2017). This is a sector where technological innovation will provide an opportunity to efficiently deliver credit to people and businesses that need it, and traditionally have been excluded from it (Putra 2017).

But it can also be a potentially huge profit-generator. A decade ago, China was experiencing similar structural barriers to the efficient allocation of capital - it suffered from a large shadow banking industry and big institutional lenders were unwilling to issue loans to small borrowers (Arner 2015). In 2007, a single peer to peer lending platform came on the market to address this structural imbalance. By 2017 the industry had 2,000 platforms and a market of $100 billion in outstanding loans. When there is a need for credit, technology and innovation will figure out a way to get it where it needs to go and that is likely to begin happening in Indonesia at a larger scale soon.

The Future of Work
What all of this means is that technology is finally empowering social entrepreneurs in developing countries to take control of their own destinies and design services that reflect the unique conditions and demands of local markets. In doing so, it is shifting the centre of gravity away from traditional gatekeepers of power and placing it in the hands of those who are closer to the ground. Technology is finally delivering on its promise to decentralize and disperse power and access to opportunities. It is empowering individuals to drive innovation based on need and in the process creating a more nimble digital economy where power and opportunities are more widely dispersed.

We are already seeing this in the way capital-intensive investment in infrastructure, and fixed plant and materials is being supplanted by smartphone apps that can often deliver similar services while lowering barriers to entry. If you have a smartphone you increasingly have access to many new ways of conducting business and meeting social needs. We are seeing it in transportation, where taxi cartels and their fleets of cars are having their market share eroded by enterprising motorbike drivers with smartphones. We are seeing it in finance, where brick-and-mortar retail bank branches are being replaced by e-wallets and cashless transfers that can be done from a mobile phone. As technological innovation continues to be driven from the bottom in developing economies, it is likely this trend will continue and be extended to other sectors, including education, healthcare, energy and many more. That is the promise of the digital economy, and it is starting to bear fruit.

REFERENCES


COLLECTION AND ANALYSIS OF LARGE-SCALE ENGLISH-TO-INDONESIAN ETHNIC LANGUAGE PARALLEL TEXT CORPUS

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ABSTRACT

Neural Machine Translation (NMT) is a recent technology in Machine Translation which performing translation between particular languages accurately and perfectly comparing with traditional Statistical Machine Translation (SMT). In order to develop NMT translation, it requires large-scale parallel corpus as training and validation data. NMT translation also requires corpus from various topics in order to improve translation performance. Existing parallel corpus such as English-German or English-France has become a benchmark in NMT translation tasks. Reversely, ethnic language parallel corpus like Indonesian ethnic language is rarely used. Indonesia consists of more than 707 living languages like Javanese and Sundanese that can be utilized as large-scale parallel corpus in NMT tasks. This paper presents the collection and analysis of large-scale English-to-Indonesian ethnic languages parallel corpus. Our Parallel corpus encompasses sentences: English-to-Sundanese, which consist of various topics such as sports, economics, politics and religions. Parallel corpus is implemented in the existing NMT model to prove our corpus well-constructed. The result, NMT with attention can produce BLEU score and RIBES score for English-Sundanese 38.91 And 89.04 respectively that indicates parallel corpus well-constructed.

Keywords: Indonesian Ethnic Language; Large-Scale Parallel Corpus; Neural Machine Translation;

1. INTRODUCTION

Neural Machine Translation (NMT) (Sutskever et al. 2014) performs translation tasks between particular language to other languages accurately and better than Statistical Machine Translation (SMT) in several cases. NMT models such as Google Neural Machine Translation (GNMT) (Wu et al. 2016), ByteNet (Kalchbrenner et al. 2016), and NMT with attention (Luong et al. 2015) can reach higher performance evaluation score comparing to SMT by using BLEU score (Papineni et al. 2002). Running NMT as translation tasks requires large-scale parallel corpus as training and validation data. Most of NMT architecture is neural network or deep learning which is known to have large-scale of training and validation learning. Koehn (Koehn & Knowles 2017) proved that increasing amount of data can improve BLEU score. In several translation tasks, it uses text corpus like English-to-French (Sutskever et al. 2014), English-to-Vietnamese (Luong & Manning 2015) and English-to-German (Luong & Manning 2015) that requires large-scale parallel corpus. Surprisingly, none of the research uses ethnic language parallel corpus as translation tasks or benchmarks in translation model.

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Indonesia consists of 707 living languages (LIPI 2016) like Javanese, Sundanese, Minangkabau, Batak, Papua and others that should be preserved in order to prevent language extinction. 15 Indonesian ethnic language has been extinction aligned with 139 almost extinction (LIPI 2016). One of the way to preserve Indonesian ethnic language is to introduce this language to younger generation as soon as possible. The earlier step of preserve ethnic language is to collect text corpus as much as possible in order to move forward as translation tasks between English-to-Indonesian ethnic language. From 707 Indonesian ethnic languages, the most used ethnic languages are Javanese and Sundanese which has 75 million and 27 million users respectively (Sakti & Nakamura 2013).
Empirical research (Sakti & Nakamura 2013) about ethnic language parallel speech corpus collection was done. The result, 6.6K Javanese sentence and 5.7K Sundanese sentence were successfully collected. However, NMT tasks merely use parallel text corpus and does not required parallel speech corpus. The amount of corpus data in empirical research is not sufficient for NMT task, we need large-scale parallel text corpus. This paper presents collection and analysis of large-scale English-to-Indonesian ethnic language parallel text corpus: Sundanese as the earlier step of Neural Machine Translation system from English-to-Indonesian ethnic languages. Corpus collection is also tried in NMT Luong’s model (Luong et al. 2015) in order to prove corpus well-constructed.

This research purposes are: (1) to collect large-scale English-to-Indonesian ethnic parallel text corpus as the earlier step of NMT tasks of Indonesian ethnic language, (2) to test the performance of Indonesian ethnic parallel text corpus like Sundanese using existing NMT models. This paper started by describing Literature Study in section II and Research Methodology in section III. Result and Discussion are described in section IV and section V respectively. Finally, conclusion is described in section VI.

2. METHODS

We have collected English text sentences from various sources like online newspaper, Twitter tweet and existing English text Corpus: Opus (Tiedemann 2012). Varied topics of corpus such as sports, politics, religions, economics and others is shuffled in training and validation set. After obtaining 80,000 English sentences, text with sentences less than 50 word per sentences will be selected as a corpus otherwise omitted. 70,000 English corpus is divided into 50,000 as train set, 10,000 as validation set and 10,000 as testing set. We select 40,000 vocab size for each pair languages based on the occurrence in sentences. The most occurrence and less occurrence is not included in vocabulary, 2 native speakers of Sundanese were occupied to translate English sentences manually to Sundanese. Text corpus pre-processing also adopted from (Sakti & Nakamura 2013): (1) convert all uppercase into lowercase, (2) remove punctuation, (3) remove non-Latin text. Corpus list can be seen in Table 1.

<table>
<thead>
<tr>
<th>Data</th>
<th>Training Set</th>
<th>Validation Set</th>
<th>Testing Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sentences (English)</td>
<td>50,000</td>
<td>10,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Sentences (Sunda)</td>
<td>50,000</td>
<td>10,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Vocab Size (English)</td>
<td>40,000</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Vocab Size (Sunda)</td>
<td>40,000</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

After collecting appropriate corpus, Neural Machine Translation (NMT) is performed to prove our corpus well-constructed. There are several models such as Sequence-to-sequence model (Papineni et al. 2002), NMT with attention (Luong et al. 2015) and Bytenet (Kalchbrenner et al. 2016) that can be used in NMT, however not all NMT model fit with this tasks. NMT families consist of two parts: (1) Encoder to encode source and target languages representation and (2) Decoder to generate target language. Both Encoder and Decoder can be replaced by powerful Long Short-Term Memory (LSTM) (Hochreiter & Urgen Schmidhuber 1997). LSTM is used to estimate the conditional probability target $p(y_1, ..., y_T | x_1, ..., x_T)$ given source sentence $p(x_1, ..., x_T)$ like in Eq. 1 (Neubig 2017)

$$p(y_1, ..., y_T | x_1, ..., x_T) = \prod_{t=1}^{T} p(y_t | v, y_1, ... y_{t-1})$$

In this research, NMT with attention (Luong et al. 2015) is performed to train English-Sundanese corpus in order to prove collection of English-Sundanese well-constructed and fit with NMT tasks.
Source text is English and target text is Sundanese which embedded in word vector (Mikolov et al. 2013). We use 2 stacking layer bi-directional LSTM layer in encoder, meanwhile 2 stacking layer LSTM used in decoder.

Figure 1 LSTM

LSTM layer consists of three layer: forget layer \( f_j \) (Eq.2), Input layer \( i_j \) (Eq.3), State layer \( s_j \) (Eq.4) and Output layer (Eq.5). Hidden state \( h_j \) is used in the next LSTM whether in encoder or decoder.

\[
\begin{align*}
 f_j &= \sigma \left( [W_{rfj} x_j] + [W_{rfj} h_{t-1}] + b_{rfj} \right) \\
 i_j &= \sigma \left( [W_{rij} x_j] + [W_{rij} h_{t-1}] + b_{rij} \right) \\
 s_j &= (f_j s_{t-1}) + (\phi \left( [W_{sij} x_j] + [W_{sij} h_{t-1}] + b_{sij} \right) i_j) \\
 h_j &= \sigma \left( [W_{hij} x_j] + [W_{hij} h_{t-1}] + b_{hij} \right) \phi
\end{align*}
\]

Mini-batch gradient descent is performed to train \( x^{(i+n)}, y^{(i+n)} \). ADAM optimizer (Ruder 2016) is used for optimizer along with stochastic gradient descent process. Beam search is performed to generate output. We train model both on CPU and GPU. We use NVIDIA Titan that fit with CUDA architecture used by Pytorch library in Python. BLEU (Papineni et al. 2002) score and RIBES (Isozaki et al. 2010) is used to measure translation performance. On the other hand, perplexity is used to measure our translation model.

3. RESULTS

We collected parallel corpus total 50.000 training set, 10.000 validation set and 10.000 testing set pair sentences of English-Sundanese. Corpus has several topics like Economics, Politics, and News that shuffled in one file. Sample corpus can be seen in Table 2.

Table 2. Corpus Sample

<table>
<thead>
<tr>
<th>English</th>
<th>On Wednesday night, Lebanese and Israeli troops clashed across the border in the first such incident in decades.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sundanese</td>
<td>Rebo peuting, pasukan Lebanese sarta Israél bentrok sakuliah wates dina kajadian sapertos munggaran dina dasawarsa.</td>
</tr>
</tbody>
</table>

Training 50.000 pair English-to-Sundanese using Luong’s model spend 6 – 8 hours in CPU with 10 epochs, meanwhile in GPU spend 2 – 3 hours with 10 epochs. Training and validation accuracy can be seen in figure.2.
In Figure 1, training and validation time increase as a time. After performing training model, inference or translation to test corpus is performed. We present English-Sundanese translation results as follow in Table 3:

Table 3. Translation Result

<table>
<thead>
<tr>
<th>Source (En)</th>
<th>Prediction (Sundanese)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some of the suggestions given by the respondents will be implemented to improve the appearance of the program and the distribution of the CD</td>
<td>Sababaraha tina saran dibikeun ku responden bakal dilaksanakeun pikeun ngaronjatkeun penampilan program sarta distribusi tina CD</td>
</tr>
<tr>
<td>The next available data on the population census results, for example, cannot be obtained before 2010 as the population census in Indonesia is only conducted once every 10 years and the last census was conducted in 2000.</td>
<td>Data salajengna sadia di lokasi populasi, contona, teu bisa diala sameh 2010 salaku kapadetan populasi dina Indonesia teh ukur dilakukeun sakali unggal 10 taun jeung minggu panungtungan ieu dilakukeun dina 2000.</td>
</tr>
<tr>
<td>However, the suggestion regarding the updating of the map which was conveyed by many respondents cannot be implemented at this time because updated data is not available</td>
<td>Sanajan kitu, saran ngeunaan kasombongan tina peta nu ieu dibeaun ku loba responden teu bisa dilaksanakeun dina waktos ieu kusabab data diropea teu sadia</td>
</tr>
</tbody>
</table>

Translation result was measured by using BLEU score and RIBES score as seen in Table IV. The correctness of model also measured by using perplexity which is defined as the exponent of the average negative log likelihood per word.

Table 4. Performance Measurement

<table>
<thead>
<tr>
<th>Language Model</th>
<th>Ppl</th>
<th>RIBES</th>
<th>BLEU</th>
</tr>
</thead>
<tbody>
<tr>
<td>NMT Attention</td>
<td>5.69</td>
<td>89.04</td>
<td>38.91</td>
</tr>
</tbody>
</table>
4. DISCUSSION

Based on BLEU score performance in 9th epoch, we produce 38.91 BLEU score and 89.04 RIBES score respectively. It indicates our corpus well-constructed collected and fit with NMT model. We also obtained 5.69 perplexity in 10th epoch that indicated translation model is well-implemented. The less validation perplexity values indicates that the model can generate correct sentence. Training process is convergence between 9th - 10th epoch. NMT with attention is also restricted from long sentence words or maximum has length less than 50 words per sentence as seen in figure 3.

Figure 2 shows that validation accuracy increased as a time and reach 65.81 % in 10th epoch, meanwhile training accuracy reach 61.87 % in 10th epoch that indicated model is prevented from overfitting. NMT with attention took training time 6 - 8 hours for training in CPU meanwhile in GPU took merely less than hours which caused by large-scale of parallel corpus (greater than 50,000 pair sentences in training). GPU is recommended to train large-scale parallel corpus. Translation result in Table III indicated model can translate or inference from English-to-Sundanese very well.

Source code and translation result can be found in http://github.com/tavgreen. For future works, English-to-Indonesian ethnic language translation also can be extended using several sophisticated NMT algorithm such as NMT by Bahdanau (Bahdanau et al. 2014), ByteNet (Kalchbrenner et al. 2016) which is reach state-of-the-art NMT with linear time and so on. Data size should be increased in order to produce better translation result. For the next research, we would like to collect not only large-scale English-to-Sundanese parallel corpus but also other Indonesian Ethnic language such as Javanese, Minangkabau and so on.

5. CONCLUSION

We have successfully collected 50,000 training set, 10,000 validation set, and 10,000 testing set of English-to-Indonesian ethnic parallel corpus. In the beginning, we only collect Sundanese as one of most used ethnic language in Indonesia. English-to-Sundanese parallel corpus is well-constructed collected indicated by 38.91 BLEU score and 89.04 RIBES score to our corpus, however to improve text corpus, we collect not only large-scale English-to-Sundanese parallel corpus but also Javanese, Minangkabau and other corpus, and increasing number of parallel sentences. We tested our corpus by using Luong’s model. This corpus can be used as parallel corpus as well as benchmarking in Neural Machine Translation tasks.

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7. REFERENCES


PERCEPTION OF THE SELECTED RESIDENTS ON HOUSEHOLD COMPOSTING IN A HIGHLY URBANIZED AREA, MANILA, PHILIPPINES

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ABSTRACT

Solid waste is one of the major problems in any congested urbanized area. Metro Manila, one of the highly-urbanized cities in Southeast Asia, generated 3.596 million tons of solid waste in 2014 (Environmental Management Bureau, 2015). Generally, this study determined the perception of the selected residents on household composting in a highly urbanized area. Specifically, this investigation was able to determine the knowledge of the residents on composting and solid waste management; described the discouraging factors they encountered concerning composting activity; and identified the perceived benefits of the said environmental action. The researchers gathered data through a series of in-depth interviews that were conducted in Barangay 521, Zone 52, District IV, Sampaloc, Manila. Twenty (20) respondents were selected through random sampling technique. Thematic analysis was used to interpret the data collected. Findings of the study showed that the residents were knowledgeable about segregation and traditional composting. They were willing to do composting activity but they were not able to implement it effectively because of several discouraging factors such as the lack of space, time constraint, and unsystematic collection of waste. The residents perceived composting as a beneficial activity because it can produce compost for agriculture, improve sanitary condition, and reduce the risk of flooding. Consequently, if these discouraging factors would be eliminated, then they would be able to perform proper ways of composting. The Local Government Units should provide appropriate trainings on how to conduct composting activity properly using advanced technologies and scientific techniques.

1. INTRODUCTION

Nowadays, solid waste and its management have become one of the major problems both in developed and developing countries (Seth et al., 2014). Asian countries have faced extensive issues when it comes to solid waste management due to population growth and increasing rate of resource consumption (Karagiannidis et al., 2010) that comes with urbanization in developing countries (Galarpe, 2017). In the Philippine setting, solid waste has reached a critical condition that needs an immediate action from all sectors of the government (Azuelo et al., 2016). According to United Nations, Department of Economic and Social Affairs (DESA) – Population Division (2016), Manila is classified as a megacity with a population of 13.131 million and ranked 18th in most megacities located in the global south.

Globally, humans produce approximately 2.0 billion tons of waste every year (Wilson et al., 2015). An assessment done by the Environmental Management Bureau of the Department of Environment and Natural Resources (DENR) on solid wastes in the Philippines shows that 56.7% of the municipal solid waste came from the residential source and 52.31% were biodegradables. This dominating waste fraction of organic wastes only implied high potentials for composting (Harir et al., 2015) as a great method on reducing the volume of municipal solid waste (Paul et al., 2007).

Solid waste management however, varies significantly between urban and rural areas (Boateng, 2016). In the rural setting, where agricultural activities are more common, composting activity is more suitable. The opposite is true for an urban setting where the recovery of organic wastes are very low (Paul et al., 2008). Additionally,
urbanization is also responsible for land-use/land cover changes (Iizuka, 2017) and land sealing (Haase, 2009) that make composting difficult in an urban setting. That is why there are more factors needed to be considered in highly urbanized area for an effective solid waste management such as the participation of the residents in the community (Kumar & Nandini, 2013), and intensive public education (Suleman et al., 2015). Appropriate implementation of solid waste management strategies is also vital to ensure the effectiveness of the action (Atalia et al., 2015) because the major challenge for sustainable solid waste management is the lack of policy enforcement system (McAllister, 2015). This can also be enhanced through the utilization of technology (Atalia et al., 2015) since the availability of technology for composting is considered as more effective means and can be adopted in municipalities among the solid waste management strategies (Azuelo et al., 2016).

Composting, by definition, is a biological degradation process of organic waste where microorganisms convert the organic waste into humus-like substance which can be used to enhance soil properties (Hoornweg, 2000). This can be done at different scale using different technology and mechanization (Lohri et al., 2017). Proper handling of this method gives various advantages such as production of biofertilizer, relatively low air and water pollution, low operational cost and income generation, making it sustainable process. Incineration, landfill, pyrolysis, and gasification but coupled with improper design of composting method could lead to methane production, odour emission, and heavy metals build-up in the product posing a threat to the environment and public health (Taiwo, 2011).

To put these in context, the researchers aimed to determine the perception of the residents about household composting in highly urbanized area. This was explored through the knowledge and awareness of the residents about composting and solid waste management, the factors which discourage them to conduct composting activity, and their perceived benefits that can be obtained from the said activity.

2. METHODS

2.1. Research Design

This study explored the perception of the residents on household composting in highly urbanized areas. To properly conduct this study, a phenomenological approach was used. Creswell and Poth (2017) in their book defined phenomenological study as describing the common meaning of a concept or a phenomenon through the lived experiences of several individuals. With this in mind, the researchers explored the experiences and problems that the residents encounter when it comes to waste management in their households and in the barangay and how these experiences discourage them to conduct composting activity. This consists of what they experienced and how they experienced these problems that discourage them to conduct composting activity in their households.

2.2. Research Locale

The research locale is set on one of the barangays located in the urban District of Manila. Specifically, this study was conducted at Barangay 521, Zone 52, District IV, Sampaloc, Manila. This barangay covers approximately two (2) hectares with a population of roughly 2500 residents 1300 of whom are male and 1200 of whom are female. This place has only six (6) streets as shown in the map (Figure 1). The barangay is under the category of flood prone area.
The estimated daily garbage collection in the barangay is equivalent to one truck of garbage waste. Biodegradable and non-biodegradable wastes are collected according to schedule (Figure 2). Biodegradable wastes are collected during Monday, Wednesday, and Friday while the non-biodegradable wastes are collected during Tuesday, Thursday, and Saturday. The barangay has also the policy of “No Segregation, No Collection”. The detailed information about the solid waste management in the barangay can be seen in Figure 3.
2.3. Respondents and Sampling Procedure

In the first set of in-depth interview, the number of respondents of this study was ten (10) only. To strengthen the qualitative data of the study, the researchers decided to conduct in-depth interview with another ten (10) respondents. In total, there are 20 respondents in the study nine of whom are male and eleven of whom are female. The age of the respondents ranges from 30 to 75 years old. They are all residents in the said barangay and were selected through random sampling technique.

2.4. Research Instruments

For the collection of qualitative data and interview, the researchers prepared interview questions validated by a solid waste management officer from the Environmental Management Bureau of DENR. Sound recorder and camera were also used during the interviews for transcription and documentation. The researchers also used pen and paper to take note of the important statements stated by the respondents.

2.5. Data Collection Procedure

In order to collect the data, the researchers conducted in-depth interview with the selected residents. Since random sampling technique was used, the researchers did a door-to-door interview. The in-depth interviews lasted for an average of 30 minutes for each respondent. The general questions asked in the interview were the following: what is their knowledge about solid waste management and composting? What discouraged them to compost in an urban setting? What are the perceived benefits that can be obtained when conducting a composting activity?

2.6. Data Analysis Procedure

The data gathered were analyzed through thematic analysis. Braun and Clarke (2006) defined thematic analysis as a method for identifying, analyzing, and reporting patterns within data. They also pointed out that the approach of thematic analysis when analyzing qualitative data is accessible and theoretically-flexible. It is composed of five phases. The first phase is the familiarization with the data that includes the transcription of verbal data. Second is the generation of initial codes. Third is the search for themes based on the codes. Fourth is the theme review and
lastly, defining and naming the themes were done (Braun & Clarke, 2006). Verbal data in the transcriptions were translated into English language.

3. RESULTS AND DISCUSSION

3.1. Knowledge and Awareness
This major theme tackled about the knowledge of the residents about how composting is done and their awareness in existing solid waste management strategies implemented in their barangay. Two superordinate themes emerged and these are Traditional Composting and Segregation of Waste.

3.1.1. Segregation of Wastes
This superordinate theme is about the segregation of waste as one of the solid waste management strategies that the residents are familiar with the most. Aside from being aware, they are practicing this in their household. They have separate trash bins for biodegradables, non-biodegradables, and recyclables.

We have trash cans, one for biodegradables and one for non-biodegradables, Resident A said.

Segregation of waste is part of the Republic Act 9003 also known as the Ecological Solid Waste Management Act of 2000. It is stated in Section 21, that all wastes coming from household, institutional, commercial, and agricultural sources should properly segregated from the source itself. Section 2(a) also states that there should be separate containers for each type of waste. Segregation of waste, together with the provision of trucks for transportation of waste, ranked the highest existing in the study areas of Azuelo et al. (2016). This is an important factor on achieving household composting in an urban setting because successful composting of biodegradable wastes is only possible if segregation of waste is done at household level (Guanzon & Holmer, 2003). Through segregation of waste, organic wastes can easily be obtained that will be used for household composting.

3.1.2. Traditional Composting
This superordinate theme is about traditional composting on what the residents know how composting is done. The residents were knowledgeable about the traditional composting where the biodegradable materials are buried in the soil. They also think that this can only be done in rural areas since these places have more available lands compared to an urban setting.

In the province, we dig up the soil, and then bury the biodegradable wastes in the soil to produce fertilizer, Resident B said.

Composting is one way of recycling organic wastes. However, this is not as simple as the residents think. Controlled parameters should be taken into consideration when conducting composting activity to achieve the optimal condition. These factors include Carbon-to-Nitrogen ratio, shredding of materials, blending of materials, temperature, reaction or pH level, moisture and aeration, and microorganisms involved (Shukla et al., 2016). Otherwise, when the best condition is not met, the process may be slowed or may not happen at all (Lohri et al., 2017). Among the existing methods of composting, based on how the residents described their method where a hole is dug and the organic wastes are buried, this is known as pit composting according to Martin and Gershuny (1992) description in their book.

3.2. Discouraging Factors
This major theme discussed the factors that discouraged the residents to conduct composting activity even though they are willing to participate most especially when it would bring good effects to the community and for the cleanliness of the surroundings. Under this major theme were three (3) superordinate themes namely Lack of Space, Unsystematic Collection of Waste, and Time Constraint.

3.2.1. Lack of Space
This superordinate theme explained that the lack of space is one of the factors that discourages the residents to conduct composting in an urban setting. They were not able to conduct composting activity because they thought that it is impossible to do this in an urban setting.

During the interview, Resident C had an immediate response,

*Where? Where are we going to compost?*

Then the resident added,

*In our situation, there is no available land that we can compost with.*

The residents thought that composting can only be done in rural areas where there a lot of available land or space that people can compost with.

According to Haase (2009), there is a direct relationship between urbanization and land sealing. This explains why in highly urbanized area, there is not enough arable land. Additionally, even though the residents are willing to recycle these organic wastes, they are discouraged by the lack of backyards or space for composting activity (Bennagen et al., 2003). Despite of this lack of space, there are still barangays in Quezon City and Metro Manila that have vacant lands which can be utilized for local community compost recycling system. Field investigation showed that it is possible to promote agricultural activities in these vacant lands (Hara et al., 2010).

### 3.2.2. Unsystematic Collection of Waste

This superordinate theme is the unsystematic collection of waste in the barangay based on the perception of the residents. The residents are segregating their wastes in their household but they are discouraged by the collection of the trucks because all of the wastes being collected are mixed up.

*They are not systematic when it comes to the collection of wastes. If only they follow their own rules, the collection of waste would be good. The garbage trucks arrive at the right time, but their agenda are disobeyed. Instead, the residents are the ones who find a way to follow their ordinance, Resident D said.*

Commonly, the trucks take up to 3 days before the collection. As a result, the biodegradable wastes in their house would start to stink and attract pests like cockroaches and rodents.

*With regards to the collection of garbage, they should have big containers that separate the three kinds of wastes; I have witnessed that abroad, Resident E said.*

Even though the barangay have implemented the ordinance of having a different schedule of collection for biodegradable and non-biodegradable, solid waste management is still not effective because it is not strictly followed, even the collectors themselves, do not follow it.

*...especially when it is Sunday, there is no one who will check the collection of waste. As a result, the wastes are really mixed up in the truck, Resident A said.*

It is also stated in the Prohibited Acts of RA 9003 that the collection of non-segregated or unsorted wastes should not be allowed following the policy “No Segregation, No Collection.” The lack of penalty for this kind of actions and the non-execution of the law is one of the most basic problems when it comes to effective solid waste management (Kumar & Nandini, 2013). It is also found out in the study of Bennagen et al. (2003) that the residents are also discouraged by the municipal collection system that is not set up to accept segregated wastes.

### 3.2.3. Time Constraint

This superordinate theme showed time as a discouraging factor to conduct composting activity in urbanized area. The residents who have a job are commonly have no time for extra activity.

*I have no time for that. I can participate if only I am available, Resident F said.*

It is said that the time in highly urbanized area is more limited, space is denser and the activities are more complex (Rezazadeh & Yazarloo, 2017). Because to this, the residents often choose to not participate in any extra
activities they considered would take a lot of time from them. Due to lack of literature on this matter, further studies should be made about the time availability of the residents to determine when would be the best time to conduct awareness-raising campaign and seminars about proper household composting. Any available member of the household that are not constricted by other activities should be given the task of composting the organic wastes and attending the said campaign and seminar. This is a possible way to overcome the hindrance posed by time constraints.

3.3. Perceived Benefits
This major theme determined the benefits that can be obtained from solid waste management and household composting as perceived by the residents in the barangay. The superordinate themes that emerged in this major theme are Compost Soil, Flood Risk Reduction, and Improved Sanitary Condition.

3.3.1. Compost Soil
This superordinate theme Compost soil has been a common knowledge for everyone. This is the product of the process of composting which can be used for agricultural purposes.

_Those biodegradables, you can turn them into fertilizer_, Resident G said.

According to a study of Jara-Samaniego _et al._ (2017), composting with gardening pruning wastes have shown their feasibility in terms of matter mineralization and humification where the composts obtained have the suitable characteristics for agricultural use. Furthermore, the composts obtained can be used as an organic fertilizer because they showed absence of phytotoxicity and suitable agronomic properties. However, the quality of compost product still depends on the quality of the organic wastes used in the process. Contaminated compost has the potential to introduce heavy metal into the food chain and therefore is not suitable for agricultural use (Kadam & Sarawade, 2016).

3.3.2. Flood Risk Reduction
This superordinate theme pertains to flood risk reduction as one of the perceived benefits. The residents perceived that if people would able to reduce the waste and dispose those wastes properly, then there will be no clogging in the drainage which is primarily the cause of flooding.

_As you know, we are experiencing rainy season right now, you can see it is very dirty, the As you know, we are experiencing rainy season right now, you can see that it is very dirty, the garbage continue to overflow, so we really need proper waste management so we can help diminish the possibility of flooding_, Resident E said.

The research locale of the study is categorized as a flood prone area. Flooding is likely becoming more frequent due to the increase of urban development and strategic measures are needed to be developed in order to mitigate the impacts brought by flood (Iizuka, 2017). According to a study of Lamond _et al._ (2012), solid waste management can be an effective response to flood risk by reducing the accumulation of waste blocking the drainage channels.

3.3.3. Health Hazards Reduction
This superordinate theme discusses about the health hazards reduction as one of the perceived benefits by the residents that can be obtained from solid waste management. The residents perceived having a good sanitary condition in their houses and in the barangay would help on the avoidance of getting diseases.

_If you can manage your wastes well, your family would not get diseases, because your house is clean and you have disposed your garbage properly. But if your wastes are being piled there, you will catch diseases_, Resident G said.
Increased urbanization with large population density can intensify the concern when it comes to solid waste management together with sanitation and associated adverse health impacts (De & Debnath, 2016). It was also perceived that improper handling of solid waste disposal gives rise to diseases (Boadi, 2016). De and Debnath (2016) found out in their study that those people with unhygienic ways of living in the area often suffer from diseases like diarrhea, malaria, and dengue. This is due to their lack of awareness to harmful effects of open dumping and proper disposal method. Also, prevalence of gastrointestinal, skin, upper-respiratory, and dengue are the diseases common in disposal sites (Galarpe, 2017). Through the practice of composting and proper solid waste management, there would be a diversion of biodegradable wastes from landfilling (Paul et al., 2007) and if the wastes are disposed properly, then there would be no dumped garbage because this commonly becomes a breeding ground for disease-causing organisms (Bernardo, 2008).

4. CONCLUSION

The study revealed that the residents were knowledgeable about solid waste management strategy like segregation of waste and traditional composting. However, they were not able to conduct composting activity because they thought that this can only be done in rural areas. The residents were willing to participate in the said activity but they were discouraged by the hindrances they have encountered. Therefore, if these hindrances can be overcome, then household composting in highly urbanized area would be feasible and the perceived benefits of the residents can be obtained. Hence, it is recommended to design an advanced composting technology that would best fit in an urban setting using scientific techniques. Furthermore, it is also recommended that the Local Government Units should conduct awareness campaign and seminars regarding proper household composting.

5. ACKNOWLEDGEMENT

The researchers would like to express their gratitude to Dr. Nieva J. Discipulo, Dr. Olivia R. Caoili, and other faculty in Senior High School Department of University of the East Manila for the assistance throughout the process of the study. To Rikki Encelan, Erika Dela Rosa, Edbert Pinet, Denisse De Jesus, and Lars Layag, thank you for lending a hand during the interview process. To Mrs. Juliet Salubre, thank you for validating the interview questions. To the Barangay Captain and respondents, thank you for the cooperation. This research would not be a success without the aforementioned people.

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THE OBSERVATION OF THE OLD MOON PHASE BY USING TAKAHASHI TOA-150 TELESCOPE AND CCD CAMERA TYPE SBIG STL-4020

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ABSTRACT
The phase of old crescent moon observation required an expert astronomer to observe and capture a precise astrophotography, where many amateur astronomers are encountering failures. The physical appearance of the moon itself, which is in thin-shaped and the lack of astronomer’s knowledge regarding the exact phase of moon, suitable weather or unpolished observation skills, are among the factors that may lead into failure results. Therefore, one novel technique by utilising correct astronomy instrumentation, which are the Takahashi TOA-150 telescope and CCD camera type SBIG STL-4020 are being tested. The results demonstrated positive result when a clearer astrophotography had been gained. Then, the data are being processed by astronomy software such as The Sky6, Mooncalc and etc.

Keywords: astronomy; astrophotography; old crescent moon

1. INTRODUCTION
Over the last few decades, observation research and attempts on the celestial objects such as moon, stars and etc., have become a norm for Muslims; to fulfil the demands of daily worship and religious affairs. Presently, various techniques are being developed by the academic astronomers from time to time so that the observation process will be more convenient. There are also improvement room on the observation criteria that need to be taken care so that the effort does not end with failure. In fact, each observant should empowers their knowledge on the facts of celestial objects and the handling methods of several astronomy’s instruments.

The Moon is a natural satellite that orbits and surrounds the Earth's orbit. This orbiting movement has resulted in varied moon visibility within the times due to the distance of the moon and the sun that constantly changing, day to day. When the distance between the moon and the sun increases, then the visibility of the moon light will get brighter, thus showing clearer and brighter moon image. This moon visibility changes is also known as the moon phase (from the crescent shape to the full moon), where the changes are related with the elongation angle of the moon.

Therefore, the observant should master the knowledge of the moon’s phases, before the observation process was conducted. The phase of dead moon, as an example, requires a skilful observant as this thin-shaped moon is really difficult to differentiate. Researchers should also identify the appropriate weather and sky conditions before observing the moon and the sun so that the resulting images will be more satisfying and meet the requiring quality.

The capability of human’s eye was limited, hence, required specialised or modernize instruments to observe for celestial body in the sky, where the observation process requires highly-skilled observant in managing several related instruments. Hence, the observant should master both the theory and practical knowledge of instrumentation methodologies, or ironically will end up wasting their time,
energy and financial aspects. In fact, unskilled astronomer will affect the results of capturing images; difficulties in processing images, difficulties in analyzing the data obtained, or the astronomy’s software is incapable to read the data gained, thus leading to major failure or a study.

Therefore, throughout this study, the researcher is using two main instruments; the telescope and the CCD camera. This CCD camera is being equipped with light-sensitive chip that may facilitate the observation process for old moon phase images, which is quite hard to capture. The observant should also consider the condition of weather and the skies, as well as recognize the suitable date and time for observing this type of moon. The appearance of old moon with shorter time, is requiring a skilful observant.

2. METHODS

2.1 Data Gathering Methodology

This study applied the qualitative type of data collection. Qualitative data gathering methods involve the reference towards factual facts, information, statements, review, responses, or relevant concepts. Meanwhile, the primary sources include books, magazines, dissertations, journals, papers, books, seminars, official diaries, pamphlets, interviews and observations. In fact, this type of data gathering method will also involve the Library Research or the Field Study.

Library research emphasizes the reference towards theoretical facts; the theory of the elongation of the moon and the sun, the Islamic perspectives on *ijtima’* theory and the instrumentation methodologies. As library research resembles the method of documentation, therefore reading materials such as the books, journals, magazines, seminar papers, newspapers and others, are being critically analyzed and scrutinized, to find for accurate resolution which meets the research objectives stated. Indeed, researcher has to visit several libraries to gain for data needed.

However, depending on the library research alone is not sufficient, where the researcher should also conducts the field study. Field study that is empirical-based concept usually provides several comprehensive founding that are not available throughout the library research. Through observation approach, the researcher will enhance their personal experience, as well as completes the empty blanks left by current written data gained before. In this study, the observant is viewing the images of old moon phase by observation technique, through the utilization of several astronomy instruments.

2.2 Data Analyzing Methodology

The data gained through library research and field study is being reviewed and analyzed by using the deductive and comparative data analyzing methods.

The deductive method refers to the description of data in order to obtain specific conclusion. The theoretical facts of old moon phase, their elongation with the sun, their visibilities, the correct technique in handling the instruments (the correct way to connect each instruments with the others), the suitability of new technique introduced (observation of the old moon phase by using CCD camera is the new technique implemented to perceive the thin-shaped of moon), the technique to overcome technical problems such as the condition of the sky and weather, are being inferred into a short summarization.

After that, all of the images gained will being compared, hence undergo the comparative data methodology. These assembled images will be compared in order to find for the most suitable moon images for the study.
2.3 The Methodology of Fixing the Focus before the Observation

Once the moon reached Days 27th, the observation process was being carried out. Therefore, the focus must be fixed accordingly to standard calibration. Connectivity of the instruments play major role in contributing clearer images of the old moon, as this old moon phase usually reflected the thinnest light compared to other moon phases. These two methods could be carried out in order to fix for the focus of CCD camera; (1) Tracks the sun first, before tracking the moon, as both the sun and the moon have identical sizes, or (2) Focus the moon before the Day of 27th or conducts the observation on the full moon, as full moon illustrated clearer images. Figure 2.0 illustrates the marking of focal length by using the pencil.

![Figure 2.0: The marking of old moon’s focal length by using a pencil](image)

3. RESULTS AND DISCUSSION

3.1 The Observation of Old Moon Phase by Using CCD Camera

The old moon is a crescent-shaped moon and it is the final phase of the moon before the *ijtima’* time. Its reflection light was quite dimmer and the shape was thinner, making it difficult to be seen and recorded by basic astronomy’s instrument. Indeed, amateur observant usually failed to distinguish between the old moon phases with the new moon, as both moons got almost the similar shape. Moreover, the observant too, has to encounter the condition of weather or the thick cloud, before any observation process could be taken place.

Therefore, an efficient and sensitive-light instrument was needed, i.e. the CCD camera. CCD camera could trap the light reflected by the old moon easily (in the form of photon’s light), through the telescope. Once the photon falls towards the camera’s pixels, some electric charges will be generated, making it easier for recording and imaging purposes.

Main specification of CCD camera is that the camera should have larger field view than the size of the old moon, so that the whole moon’s images could be recorded. If the size of the moon is larger than the field view, only certain parts of the moon could be captured. Once the size of the field views fix accurately the size of the moon, than a specific mounting (which its distance has been fixed earlier) could be used to observe the precise image of the moon. This formula was used to indicate the FOV value of the CCD camera’s lens.

\[
FOV = \frac{(3438 \times \text{pixel’s size})}{\text{focal length}}
\]

The calculation for FOV’s value for CCD camera model SBIG-4020 that was connected to Telescope model Takahashi TOA-150 is as follows:

a) Identify the important information needed in FOV’s calculation.

<table>
<thead>
<tr>
<th>CCD Camera’s Sensor Chips Size</th>
<th>Telescope’s focal length</th>
<th>Old moon’s Circumference</th>
</tr>
</thead>
<tbody>
<tr>
<td>2048 x 2048, 15.2 x 15.2 mm</td>
<td>1100 mm</td>
<td>0.5 ”x 0.5”</td>
</tr>
</tbody>
</table>
b) Fill the information in the formula.

\[
\text{FOV}_x = \frac{(3438 \times 15.2 \text{ mm})}{1100 \text{ mm}} = 47.5 \text{ arc minutes}
\]

\[
\text{FOV}_y = \frac{(3438 \times 15.2 \text{ mm})}{1100 \text{ mm}} = 47.5 \text{ arc minutes}
\]

Given that 0.5 degrees is equal to 30 arc minutes, then the field of view of 47.5 arc minutes is enough to fit the size of the old crescent.

### 3.2 Processing the Image of Old Moon Phase

The images gained were being processed by using the ‘Mooncalc software’, which indicates the age of the moon, the elongation value and the moon’s position. In a study case related to moon observation on the Syaaban (the Islamic month) 1438 h, this information was obtained:

- The age of the moon: 23 hours 8 minutes
- The elongation value: 13 483 degree (or 13 degrees 23 minutes and 0 seconds)
- The position of the moon: altitude 10.515 degrees

Then, the images are being processed with ‘CCDSoft software’ to get clearer images of those old moon’s pictures captured. This process includes reducing noise and ambiguity effects on the original image by removing the flat frame and dark frame on it. The old crescent image obtained on 25 April 2017 at 8.10 a.m. at the University Malaya Observatory Centre, for an example, became more apparent after being processed with the software. The observation information is as follows: the sun’s altitude is 15.026 degrees, elongation is 20.432 degrees while the age is 36.12 hours.

Figure 3.0 illustrates the raw image of the old moon while Figure 3.1 and 3.2 illustrate the processed image of the old moon by using CCDSoft software. The final image that has been processed through the flat field frame and the dark frame show better and clearer crescent-shaped of the old moon.

<table>
<thead>
<tr>
<th>The images of the old moon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEFORE:</td>
<td>Figure 3.0: The raw image of old moon.</td>
</tr>
</tbody>
</table>

![Figure 3.0: The raw image of old moon.](image-url)
The processed image should have been thicker than the above image. According to Thierry Legault (he hold the world’s record on the youngest age of the new moon’s image captured), the condition of the sky plays important role in capturing a bright and clear image of the moon. He suggests that the sky should be in bluish color, which means in the brightest condition. However, these images were disturbed by the sun’s contrast. Other conditions such as the thickness of the sky and the disturbance from the particles and water vapor floating in the atmosphere will reduce the quality of the images.

4. CONCLUSION

CCD cameras play a role in capturing the reflected light of the old crescent and thus producing a clearer view of the image. As a result, the use of CCD cameras together with a telescope equipped with an extender, has successfully assisted the process of observing the old moon phase that is quite dimmer and difficult to differentiate. Besides that, as the field view of the CCD camera should have been smaller than the size of the moon, therefore, the FOV’s value ought to be gained first, by using the stated formula. Through the calculation, the FOV’s value of the old moon obtained is 47.5 arc minutes, exceeding the value of 30 arc minutes that is equal to 0.5” moon’s circumference. Therefore, 47.5 arc minutes is suitable for observing the old moon phase, with circumference of 0.5” x 0.5”. Furthermore, the handling technique of the CCD camera should be precise and correct, where later the images obtained will be processed through certain software; the Mooncalc and CCDSof software. This software will enhance the quality of the images, plus provide specific detailing on the moon.

As summary, the CCD camera imaging technique is the new relevant technique that could be applied to solve the difficulties in capturing the image of the old moon. However, in Malaysia context, this technique will only being applied as secondary choices, as Malaysian are still dependable on the current concept of Wujudul Hilal and Imkanur Rukyah.

4.1 Recommendations on Research

These recommendations should have been considered before conducting the observation process.
i) Make sure that the weather and the condition of sky (bright and bluish in color) is suitable before indicating the observation process.

ii) Fix the focus first (through two methods mentioned before) before starting to observe for the moons.

iii) Global Positioning System (GPS) should be applied to track the old moon precisely.

iv) The mounting system must be correctly stabilized, so that the images of the moon could be recorded accurately.

v) Continuous recording and capturing process are needed to gain multiple images that will be compared later.

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SYNTHESIS, CHARACTERIZATION AND ELECTROCHEMICAL STUDY OF PLATINUM NITROGEN-DOPED GRAPHENE NANOCOMPOSITE

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ABSTRACT

Graphene materials have attracted attention in various applications due to good electrical conductivity and large surface area. The presence of noble metal could improve their conductivity and electrocatalytic activity. In this study, nitrogen-doped graphene (NGr) is synthesized in the presence of platinum nanoparticles (Pt) to investigate their electrochemical properties. X-ray diffraction and transmission electron microscopy were used to characterize the synthesized nanocomposite. The electrochemical study of synthesized Pt/NGr nanocomposite was investigated using cyclic voltammetry and electrochemical impedance spectroscopy. From the results, it is showed that the synergistic effect of NGr and Pt nanoparticles enhance the electrocatalytic activity and rate of electron transfer process.

Keywords: Graphene; Platinum nanoparticles

1. INTRODUCTION

Graphene, a two-dimensional nanocarbon structure has growing interest in the field of electrochemistry due to their good electrical conductivity and large surface area. Its special properties make it an ideal support for dispersion of metal nanoparticles (Sun & Kim, 2015). The presence of foreign atoms such as nitrogen in the graphene sheet could enhance the electrochemical performance and reactivity of graphene (Tian et al., 2014). Therefore, nitrogen is used as a dopant in order to increase the active sites on graphene surface for uniform dispersion of metal nanoparticles (Ghanbarlou et al., 2015). Platinum nanoparticles (Pt NPs) are promising noble metal due to their outstanding conductivity and extremely high electrocatalytic activity (Zhao et al., 2016). However, the consumption of Pt must be minimized due to low natural abundance and high cost. The particles size of Pt NPs could be decrease by dispersion on larger surface area of NGr (Sripada et al., 2015). It is also expected that the incorporation of Pt NPS on NGr support material can lower agglomeration of Pt NPs, hence increasing the stability and activity of the catalytic nanoparticles (Liu et al., 2014). In this study, we synthesized Pt/NGr nanocomposite and study their electrochemical properties on a glassy carbon electrode. The Pt/NGr nanocomposite showed improvements in the catalytic activity compared to the pure NGr and bare GCE.
2. METHODS

2.1. Synthesis of Pt/NGr nanocomposite

NGr was synthesized by a microwave-assisted method (Tajabadi et al., 2015). For Pt/NGr nanocomposite, it was prepared by mixing 20.0 mL of 0.05 mol L\(^{-1}\) \(\text{K}_2\text{PtCl}_4\) aqueous solutions with 2.0 mL of NGr suspension (10 mg mL\(^{-1}\)). Then, the pH of the solution was adjusted to 8.0 using 0.1 mol L\(^{-1}\) sodium hydroxide solution. Then the mixture was stirred and heated to 60 °C for 35 min. This was followed by the addition of 0.01 mL hydrazine hydrate to the mixture with continuous stirring and heating for another 30 min. During this process, Pt nanoparticles were deposited on the surface of NGr nanosheets to form Pt/NGr. Next, the Pt/NGr suspension was left standing at room temperature before centrifuged at 4000 rpm for 15 min. Finally, the sample was dried in a drying oven at 60 °C for 24 h.

2.2. Fabrication of Pt/NGr modified electrode

For the preparation of Pt/NGr/GCE, 1.0 mg Pt/NGr was dispersed in 1.0 mL deionized water and 10 μL nafion solution, and later sonicated for 1 h to form a homogenous suspension. After that, 10 μL of the suspension was drop-casted on the surface of the clean GCE using a micropipette and was evaporated overnight at room temperature. The NGr/GCE was also prepared in the same procedures as a comparison.

2.3. Characterization

X-ray diffraction (XRD) was operated using a Siemens D500 diffractometer with Cu Kα (λ=1.541 Å) radiation, to determine the crystal structure and confirm the presence of Pt NPs. A JEOL JEM-2100F transmission electron microscopy (TEM) was employed to investigate the morphology of the nanocomposite.

2.4. Electrochemical study

Electrochemical experiments such as cyclic voltammetry (CV) and electrochemical impedance spectroscopy (EIS) were performed using an Autolab potentiostat/galvanostat model PGSTAT302 (Eco Chemie, Netherlands). All electrochemical experiments were performed using a conventional three-electrode system. The Pt/NGr modified glassy carbon electrode (GCE, 3 mm diameter) was the working electrode, while a platinum wire and Ag/AgCl (3.0 M KCl) were the auxiliary and reference electrodes, respectively.

3. RESULTS AND DISCUSSION

3.1. XRD and TEM analysis

The crystalline structure of the synthesized Pt/NGr nanocomposite was identified from XRD. As presented in Figure 1, the presence of several peaks at 2θ values of 40.00, 46.39, 67.82, 81.62 and 86.00 are attributed to the (111), (200), (220), (311) and (222) crystal planes, respectively. All the diffraction peaks can be indexed to the face-centred cubic (fcc) crystalline lattice of Pt with a good agreement of standard JCPDS entry code No. 01-087-0640. The mean particle size of Pt NPs on the NGr support was calculated from Scherrer equation and was found as 4.1nm.
TEM was used to examine the morphology of the Pt/NGr nanocomposite. Figure 2(a) shows that spherical shaped of Pt NPs formed on the surface of NGr. The Pt particle size distribution was calculated as shown in the size-distribution histogram (Figure 2(b)). The mean particle size is about 4.3nm, which shows a good agreement with the XRD analysis. The narrow particle size distribution and smaller particle size of Pt NPs confirm that nitrogen doping of graphene affects the nucleation and growth of the Pt NPs.

Figure 5 (a) TEM image of Pt/NGr nanocomposite. (b) The Pt particle size-distribution histogram.
3.2. Electrochemical studies of Pt/NGr nanocomposite

CV was performed to investigate the electrochemical performance of various electrodes such as bare GCE, NGr/GCE and Pt/NGr/GCE in 0.1M KCl with 5.0 mM Fe \([\text{CN}]_6^{3-4-}\) at 10 mV s\(^{-1}\). From Figure 3, the anodic and cathodic peak current of NGr modified GCE were increased compared to bare GCE. This effect is due to the presence of NGr which provides superior conductivity and large surface area for the dispersion of noble metal nanoparticles (Novikova et al., 2016; Zhang et al., 2014). A further increase in redox peak current was observed for Pt/NGr modified GCE. This could be due to the synergic effects of the Pt nanoparticles and NGr which exhibit a higher catalytic effect and outstanding conductivity.

Figure 6 Cyclic voltammograms in 0.1 M KCl with 5.0 mM Fe \([\text{CN}]_6^{3-4-}\) at a scan rate of 10 mV s\(^{-1}\)

EIS was used to investigate the electron transfer process across the electrode-electrolyte interface of the modified electrodes. The Nyquist plots of the bare GCE, NGr/GCE and Pt/NGr/GCE in 0.1 M KCl with 5.0 mM Fe \([\text{CN}]_6^{3-4-}\) is presented in Figure 4. In EIS, the Nyquist plot consists of a semicircle at a higher frequency which signifies the interfacial electron transfer resistance (R\(_{\text{ct}}\)) at the working electrode-electrolyte interface. The electron transfer resistance can be evaluated by comparing the diameter of the semicircle. The bare GCE shows the largest semicircle diameter compared to the NGr/GCE and Pt/NGr/GCE, due to a slow interfacial electron transfer process. The semicircle diameter decreased a lot for NGr and a further decreased can be observed for Pt/NGr.
Figure 7 Nyquist plots of Pt/NGr/GCE, NGr/GCE and bare GCE in 0.1M KCl with 5.0 mM Fe [(CN)₆]³⁻/⁴⁻ within a frequency range 100 kHz to 100 mHz.

4. CONCLUSION

Nitrogen-doped graphene was synthesized in the presence of platinum nanoparticles. XRD and TEM analysis showed that the average diameter of Pt NPs is nearly same. They also confirmed the presence of nitrogen in graphene sheet produced significantly small size Pt NPs. CV measurement and impedance analysis on GCE electrode showed the higher electron conductivity and minimum charge transfer resistance for Pt/NGr due to high surface area. Therefore, Pt/NGr could be utilized as effective electrode materials for future analytical applications.

5. ACKNOWLEDGEMENT

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NUMERICAL STUDY OF WATER-CNT NANOFLUID FLOW ALONG A STRETCHED CYLINDER

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ABSTRACT

A heterogenous water-based nanofluid boundary layer flow over a stretched cylinder is studied. Single-wall and multiple-wall carbon nanotubes (CNT) are suspended into the water. The effects of magnet-electric field and heat flux are introduced into the flow initial condition. The physical properties of viscosity and effective thermal conductivity of the CNT are employed. Using similarity transformation, the governing nonlinear partial differential equations of continuity, momentum and energy are reduced to a set of nonlinear ordinary differential equations. These equations are converted into a first order boundary value problem by using a shooting technique before they are further solved numerically using a MATLAB algorithm. Variation of skin friction and local Nusselt number of the nanofluids are observed. The velocity and temperature distributions of the flow are also sketched and analyzed as values of the controlling parameters vary.

Keywords: CNT; Heat transfer; Magnetohydrodynamics; Nanofluids; Shooting method

1. INTRODUCTION

Nowadays, the motivation in nanofluid research is highly driven by the subject’s capacity to improve heat conductivity of regular base fluid at lower cost as well as enhancing overall heat transfer process and lengthening the lifespan of thermal machinery and equipment. The term “nanofluid” has been introduced by Choi (1995) to refer a mixture of liquid and solid nano-scaled particles which can be prepared by direct dispersion or by forced dispersion of condensed powdered nanoparticles. Previously, many researchers have investigated the effects of suspended particles in the flow by focusing on thermophoresis and Brownian motion as components in the flow transport equation alone with assumption that these particles will have minimal impact on the concentration. However, when Buongiorno (2006) discussed the conservation equations for nanofluid as a two-component flow in the absence of chemical reaction, both factors of thermophoresis diffusion and Brownian motion are added into the energy equation to examine their influence on the flow heat flux performance.
Due to demands in many industrial and engineering applications such as in end products manufacturing, hot rolling and extrusion, nuclear and metallurgical processes, natural resources and energy transportation, wire drawings, aerodynamics, wind tunnel testing and etcetera, hydrodynamics research along a stretching flat surface has developed tremendously and the corresponded literatures are abundance. However there is still room for improvement involving fluid flows over a stretching cylinder. Among the fluid flows studied particularly within this scope include the effect analysis of suction and blowing (Ishak et al., 2008), slip velocity (Mukhopadhyay, 2013), partial slip and suction (Abbas et al, 2015) and prescribed heat flux (Bachok & Ishak, 2010). Recently Hayat et al. (2015) solved the axisymmetric flow of third grade fluid on a stretching cylinder by using homotopy analysis method (HAM) while Naseer et al. (2014) studied the hyperbolic tangent fluid on an exponentially stretching vertical cylinder. They found out that the flow temperature distribution is decreasing faster with higher value of Prandtl and Reynolds numbers.

Stretching cylinder is yet another interesting geometry ventured by researchers in heat and mass transfers of nanofluids. Similarity analysis of a boundary layer flow of nanofluid on an isothermal cylindrical surface was conducted by Gorla et al. (2011). This work is extended by Gorla et al. (2012) to take into account the melting cylinder effect which further increases the Nusselt number at the solid/liquid interface. Akbar et al. (2013) analyzed radiation and magnetohydrodynamics (MHD) effects on stagnation heterogenous nanofluid flow while Ashorynejad et al. (2013) solved MHD effect in a homogenous mixture of nanofluid using Runge Kutta (R.K) method. Four different types of nanoparticles in a water based fluid considered in (Ashorynejad et al., 2013) are copper (Cu), silver (Ag), alumina (Al2O3) and titanium oxide (TiO2). It is found that the Nusselt number decreases as value of the MHD parameter escalates. The authors also concluded that copper (for small magnetic value) and alumina (for higher magnetic value) contribute towards the highest cooling performance of the model. Later on, Qasim et al. (2014) investigated a boundary layer slip flow of ferrofluid utilizing magnetic and non-magnetic nanoparticles along a stretching cylinder with prescribed heat flux. It is concluded that percentage difference in heat transfer performance between these two types of water based nanofluids can be reduced as the magnetic field strength is enhanced.

In the present work, the heat transfer is accomplished with the MHD effects when the fluid is flowing along a stretching surface embodying a homogenous mixture of water as the base fluid and carbon nanotubes (CNT) as the suspended nanoparticles (Ul-Haq et al., 2015) has been revisited. This time, the stretching Cartesian plane in the previous model (Ul-Haq et al., 2015) is replaced with a stretching cylinder. The velocity and temperature profiles of the current model are presented graphically as well as the distributions of reduced skin friction and reduced Nusselt number. The effect of carbon nanotubes and curvature parameter are observed and discussed. Moreover, streamlines and isotherms of the model are also sketched.

2. MATHEMATICAL MODEL

Consider a steady incompressible flow of water based fluid which contains two kinds of carbon nanoparticles namely: Single Wall Carbon Nano Tubes (SWCNTs) and Multiple Wall Carbon Nano Tubes (MWCNTs) along a stretching cylinder with diameter $a$. The fluid occupied the semi-infinite domain $(r > a)$. The frame of reference is adjusted in such a way that the $x$-axis is considered along the axis of the cylinder and $r$-axis is adjusted along the radial direction of the cylinder (see Figure 1).
It is further considered that the surface of the cylinder is stretched along the \( x \)-axis with the linear velocity \( U_v = U_0(x/l) \) while the temperature at surface is defined in terms of a prescribed heat flux \( T_w = T_0(x/l) \). For present phenomena the two dimensional boundary layer equations in cylindrical coordinate system that replicate the continuity, momentum and energy equations are defined as:

\[
\begin{align*}
\frac{\partial}{\partial x}(ru) + \frac{\partial}{\partial r}(rv) &= 0, \\
u \frac{\partial u}{\partial x} + v \frac{\partial u}{\partial r} &= \frac{\mu_{nf}}{\rho_{nf}} \left( \frac{\partial^2 u}{\partial r^2} + \frac{1}{r} \frac{\partial u}{\partial r} \right) - \frac{\sigma_{nf}}{\rho_{nf}} B_0^2 u, \\
u \frac{\partial^2 T}{\partial x^2} + v \frac{\partial^2 T}{\partial r^2} &= \frac{k_{nf}}{(\rho c_p)_{nf}} \left( \frac{\partial^2 T}{\partial r^2} + \frac{1}{r} \frac{\partial T}{\partial r} \right),
\end{align*}
\]

where, \( u \) and \( v \) are the velocity components along the \( x \)- and \( r \)-axis, \( T \) is the temperature, \( \nu_{nf} \) is the kinematic viscosity of nanofluid, \( \sigma_{nf} \) is the electric conductivity of nanofluid, \( B_0 \) is the magnetic field impose in the \( r \)-direction, \( k_{nf} \) is the effective thermal conductivity of nanofluid, \((\rho c_p)_{nf}\) is the specific heat of nanofluid and \( \delta \) is the slip coefficient. The effective properties of the nanofluid may be expressed in terms of the properties of base fluid and nanoparticles as follows:

\[
\begin{align*}
\nu_{nf} &= \frac{\mu_{nf}}{\rho_{nf}} = \frac{\mu_f}{(1-\phi)^{2.5}}, \\
\rho_{nf} &= (1-\phi) \rho_f + \phi \rho_{CNT}, \\
(\rho c_p)_{nf} &= (1-\phi)(\rho c_p)_f + \phi (\rho c_p)_{CNT}, \\
k_{nf} &= \frac{1}{\alpha_{nf}} = \frac{k_f}{1-\phi} + \phi \frac{k_{CNT}}{2f},
\end{align*}
\]

In above expressions, \( \mu_f \) is the dynamic viscosity of the base fluid, \( \phi \) is the nanoparticle volume fraction of CNTs, \( \alpha_{nf} \) is the thermal diffusivity, \( k_{nf} \) is the thermal conductivity of the nanofluid, \((\rho c_p)_{nf}\) is capacity heat of the nanofluid, \( \rho_{nf} \) is the density of the nanofluid, \( \rho_f \) and \( \rho_{CNT} \) are the thermal conductivities of the base fluid and carbon particles respectively. Connected boundary conditions for the present model are

\[
u = 0, k_{nf} \frac{\partial T}{\partial r} = -q_v(x) \text{ at } r = a,
\]
In the above expression, \( q_w(x) \) is the variable heat flux, \( \nu_{nf} \) is the kinematic viscosity of the nanofluid, \( T_{\infty} \) is the ambient fluid temperature. By introducing the following similarity transformations,

\[
\eta = \frac{r^2 - a^2}{z a} \sqrt{\frac{\nu_w}{\nu_x}}, \quad \psi = a f(\eta) \sqrt{\frac{\nu_f}{\nu_w}} x, \quad T = T_{\infty} + \frac{q_w}{k_f} \sqrt{\frac{\nu_f}{\nu_w}} \theta(\eta),
\]

the stream function \( \psi \) defined as \( \psi = \frac{1}{2} \sqrt{\frac{\nu_f}{\nu_w}} (1 + \phi) \partial f' \partial \eta \) identically satisfies the Eq. (1). By invoking (6) in Eqs. (2), (3) and (5) we get,

\[
\frac{(1 + 2 \gamma \eta) f'' + 2 \gamma f'}{(1 - \phi) \nu f} + f f'' - f' \gamma - \frac{M}{(1 - \phi) \nu f} f' = 0,
\]

\[
\frac{k_{nf}/k_f}{(1 - \phi) \nu_f} \frac{(1 + 2 \gamma \eta) \theta'' + 2 \gamma \theta'}{(1 - \phi) \nu \theta} + Pr \frac{(f \theta' - f' \theta)}{\theta} = 0,
\]

along with the boundary conditions:

\[
\begin{align*}
    f(0) &= 0, f'(0) = 1 + \frac{\beta}{(1 - \phi) \nu f} f''(0), \quad \theta'(0) = -\frac{k_f}{k_{nf}}, \\
    f' (\eta) &\rightarrow 0, \quad \theta (\eta) \rightarrow 0 \quad \text{as} \quad \eta \rightarrow \infty.
\end{align*}
\]

In the above expression, primes denote the derivatives with respect to \( \eta \), whereas \( M = \frac{\sigma_{nf} B_0^2}{\rho_f U_0^2} \) is the Hartmann number, \( \gamma = \sqrt{\frac{\nu_f}{U_0 \alpha^2}} \) is the curvature parameter, \( Pr = \frac{\mu_J (\rho_c \nu_f)}{\nu f \kappa_f} \) is the Prandtl number and \( \beta = 5 \eta U_0 / \nu f \) is the slip parameter. Physical quantity of interest are defined as

\[
C_f = \frac{\tau_{nf}}{\rho_f U_0^2} = \frac{\mu_{nf} (3 \nu / \nu_f)}{\rho_f U_0^2}, \quad N_u = \frac{\epsilon \eta w}{k_f (T_\infty - T_{\infty})} = \frac{2 k_f (\theta' / \theta)}{k_f (T_\infty - T_{\infty})}.
\]

Making use of Eq. (6) in Eq. (10), we get

\[
Re_x^{1/2} C_f = \frac{1}{(1 - \phi)^2 \nu f} f''(0), \quad Re_x^{1/2} Nu_x = \frac{k_{nf}}{k_f} \frac{1}{\theta(0)}.
\]

3. RESULTS AND DISCUSSION

In order to obtain the results for velocity profile \( f(\eta) \) and temperature profile \( \theta(\eta) \), above system of equations defined in equations (7) and (8) combine with the associated boundary conditions (9), are solved with help of RK method. To solve such kind of boundary value problem we first convert the system into the initial value problem with the help of shooting technique. This numerical method is programmed in MATLAB with the step size of \( \Delta \eta = 0.01 \) and used to solve the coupled system in the interval \( 0 \leq \eta \leq \eta_{\text{max}} \), where \( \eta_{\text{max}} \) is the finite value of the similarity variable \( \eta \) for the far field boundary conditions.

To validate our present results, we have made comparison with existing literature and achieved an excellent comparison with the results produced by Bachok & Ishak (2010) in Table 1. Thermo-physical properties of each base fluid and nanoparticles are mentioned in Table 2. There are four important physical parameters namely; curvature parameter \( \gamma \), slip parameter \( \beta \), Hartmann number \( M \) and nanoparticle volume fraction \( \phi \) that affect the fluid motion and heat transfer rate. In Figures 2-4, results are plotted for reduced skin friction coefficient and reduced Nusselt number for above said physical parameters. In Figure 2, absolute values of reduced skin friction and reduced Nusselt number are plotted against Hartmann number \( M \) and for nanoparticle volume fraction \( \phi \). By enhancing the values of Hartmann number, it tends to enhance the Lorentz force which resists the fluid motion within the boundary layer domain and at the surface of the stretching cylinder. Similarly, by incorporating the
nanoparticle volume fraction $\phi$ within the base fluid (water), number of molecules per unit volume will increase for this homogenous mixture so the solvent will become denser. Clearly, results plotted in Figure 2 depict the same increasing effects at the surface described for Hartmann number and nanoparticle volume fraction. Furthermore, we can observe that an increase in the nanoparticle volume fraction enhances the heat transfer rate at the surface (see Figure 2(b)). Effects of curvature parameter are also significant for fluid flow and heat transfer. As we can observe in Figure 3(a), results plotted for the flat surface show lower skin friction coefficient as compared to the nonzero values of curvature parameter. Same influence of curvature parameter can be observed for reduced Nusselt number when it is compared with the behaviour of reduced skin friction coefficient (see Figure 3(b)). Smooth surfaces are also key factor where the fluid has less friction with the surface of cylinder. Physically, it will be more suitable to decide that by enhancing the slip parameter gives the low skin friction at the surface (see Figure 4(a)). However, there is a low heat transfer rate at the surface of the cylinder by increasing the slip parameter (see Figure 4(b)). Although flow behaviour and temperature distributions remain same but through all the results plotted in Figs. 2-4, it can further be observed that SWCNTs have comparatively higher friction and heat transfer rate at the surface of stretching cylinder as compared to the MWCNTs.

Table 1 Comparison of the present results with the existing literature for the Nusselt number when $M = \phi = \beta = 0$.

<table>
<thead>
<tr>
<th>$\gamma$</th>
<th>Pr</th>
<th>Bachok &amp; Ishak (2010)</th>
<th>Present Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>0.72</td>
<td>1.2367</td>
<td>1.23664</td>
</tr>
<tr>
<td>1.0</td>
<td>1.00</td>
<td>1.0000</td>
<td>1.00000</td>
</tr>
<tr>
<td>6.7</td>
<td>0.3333</td>
<td>0.33330</td>
<td>0.26876</td>
</tr>
<tr>
<td>10.0</td>
<td>0.2688</td>
<td>0.26876</td>
<td></td>
</tr>
<tr>
<td>1.0</td>
<td>0.72</td>
<td>0.8701</td>
<td>0.87018</td>
</tr>
<tr>
<td>1.0</td>
<td>0.7439</td>
<td>0.74406</td>
<td></td>
</tr>
<tr>
<td>6.7</td>
<td>0.2966</td>
<td>0.29661</td>
<td></td>
</tr>
<tr>
<td>10.0</td>
<td>0.2422</td>
<td>0.24217</td>
<td></td>
</tr>
</tbody>
</table>

Table 2 Thermo-physical properties of water and CNTs (Hone, 2004; Huoff & Lorents, 1995).

<table>
<thead>
<tr>
<th>Thermo-physical Properties</th>
<th>Base Fluid</th>
<th>Carbon Nanotubes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Water</td>
<td>SWCNT</td>
</tr>
<tr>
<td>$\rho$ (kg/m$^3$)</td>
<td>997</td>
<td>2600</td>
</tr>
<tr>
<td>$c_p$ (J/kg-K)</td>
<td>4179</td>
<td>425</td>
</tr>
<tr>
<td>$k$ (W/m-K)</td>
<td>0.613</td>
<td>6600</td>
</tr>
<tr>
<td>Pr</td>
<td>6.2</td>
<td>-</td>
</tr>
</tbody>
</table>
Figure 2 Variation of (a) skin friction (b) local Nusselt number for various values of $M$ and $\phi$.

Figure 3 Variation of (a) skin friction (b) local Nusselt number for various values of $\gamma$ and $\phi$.

Figure 4 Variation of (a) skin friction (b) local Nusselt number for various values of $\beta$ and $\phi$. 

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In Figures 5-7, results are plotted for velocity and temperature profiles for various values of emerging parameters. In Figures 5(a) and 5(b), it is observed that an increase in the CNTs gives a rise in both velocity and temperature profiles. However, influences of Hartmann number on velocity and temperature profiles are quite opposite just because of its physical significance as we have discussed before for Figure 2. Also, the boundary layer thickness is getting decreased by increasing the values of Hartmann number. Similarly, for the flat surface ($\gamma = 0$), the fluid velocity remains lower as compared to the nonzero values of curvature parameter and hence the boundary layer thickness is also increasing for present case (see Figure 6(a)). Furthermore, it can be observed in Figure 6(b) that by increasing the values of slip parameter, temperature profile switches its behaviour near the surface ($\eta \approx 0$) from decreasing to increasing pattern. Results plotted in Figure 7 against the slip parameter are comparatively similar when these are compared with Figure 5.

![Figure 5 Variation of (a) velocity (b) temperature profile for various values of $M$ and $\phi$.](image)

![Figure 6 Variation of (a) velocity (b) temperature profile for various values of $\gamma$ and $\phi$.](image)
4. CONCLUSION

Through this analysis we have made comparison between water based SWCNTs and MWCNTs over a stretching cylinder. Furthermore we have considered the combined slip and magneto-hydrodynamics effects. With considerable attention, we have the following key findings:

- An increase in the nanoparticle volume fraction gives a rise in the heat transfer rate.
- MHD and curvature parameter have same increasing behavior on the reduced skin friction however
- results produced for Nusselt number are quite opposite for both parameters.
- SWCNTs have comparatively higher friction and heat flux at the surface as compared to MWCNTs.
- Slip parameter $\beta$ has same decreasing behavior for both reduced skin friction and reduced Nusselt number.

5. ACKNOWLEDGEMENT

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6. REFERENCES


THE ROLE OF SCIENCE AND TECHNOLOGY IN HALAL INDUSTRY : A CASE STUDY IN THAILAND.

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ABSTRACT

The halal global industry have been growing very fast in the world and become a powerful market force where the demand of the halal food is estimated to be increase in the future. Science and technology have become one of the branch of knowledge that have been widely used to drive a good progress in halal market. However, evolution of halal market in the world are not homogenous. It is influence by culture, lifestyle, buying power and religion obligation that always changing from time to time. To become an international halal hub a countries need to enhance and manipulate the uses of science and technology in order to bring halal brand into the world. In this context, the development of halal industry will be measured by how science and technology are involved in research and development, institutions and society. The investigation in this case was carried out by document reviews and interview regarding halal institutions and research and development bodies. We found that science and technology play important roles as an institution that provide valid experimental test as needed by halal industry to penetrated into global market and does contributes in terms of research and development as well as society.

Keywords: Halal industry; Institutions; Research and development; Science and technology

1.0 INTRODUCTION

The halal global industry have been growing very fast and become powerful market force where the science and technology institutions is are being widely used in halal industry. Science and technology institution are not only applied in research and development but also as an initiatives to improve society by giving them the best and trustworthy halal food especially for the Muslim people (Zailani, Arrifin, Wahid, Othman, & Fernando, 2010).

Halal industry development are not homogenous. This is because the halal trends is slowly change according to the factor like lifestyle, culture, buying power and religion obligation that always changing from time to time. Various review previously has been publish in relation to halal authentication, halal logistic, halal logo and other that related to halal industry. However in each categories of halal industry there are science and technology institution involved.

Every years there are increasing number of researcher in doing research in halal studies but many of them focusing on halal food. Many researcher are focusing on halal food because of food is important aspect to Muslim that must consider especially when we consume food every day. The trends of halal studies are varying in each years and this is include food outlet, cosmetic, food product, meat consumption, certificate and halal logo (Abdul Aziz & Sulaiman, 2014).

At the current rate of global halal market development it is interesting to understand the role of science and technology and their implication toward the halal industry. In this paper a new look will be added to halal studies that will contribute to the development of halal industry Realizing the contribution of science and technology as an institution to the significant growth of halal industry this paper attempt to address the halal industry in Thailand and the importance of the science and technology to the halal industry. Besides in result and discussion we will state the role of science and technology in halal industry of Thailand.

1.1 Halal Industry

Halal related matters have a strong connection with the halal concept. The halal related matters not only focus on foods and drinks, but it also includes politics, social and economy. This is include the
consumables halal related matters are categories as pharmaceuticals, animal welfares, logistics, hygiene, presentation and storage, cosmetic and services. Meanwhile, the non-consumable halal matters are finance, education, laboratory analysis and friendly hospitality services and any other area of life for human being (Che Mohd Zaina, Ab Rahmanb, Mohd.Ishanc, & Ab Azizd, 2015). Halal concept has very specific motives. It is show the purity of the region, to safeguards the Islamic mentality, to maintain self-respect, integrity and to preserve future generations (Alqudsi, 2014).

In Islamic perspective, halal is derived from the Arabic word halla,yahillu, hillan that means to free, to split and to allow. Al-Qardhawi (1993) explains that “halal” means permissible by Islamic Law. While “haram” is opposite to halal which means forbidden and unlawful. In other words, haram means prohibited where the product contains pork, alcohol, prohibited food ingredients of animal origin, and the products are not prepared according to Islamic Law (Mathew, Amir Abdullah, & Mohamad Ismail, 2014). The process of producing halal products begin from the farm and ends until at the user and must fulfill the requirements that are needed to be labeled as halal products including the ingredients, equipment used, packaging and product storage (Lada, Tanakinjal, & Amin, 2009).

Halal global industry is expanding rapidly throughout the world and created a new industry or categories that moving towards connected halal value system (Tieman, 2015). The expanding market size of halal food are the result from the demand of halal food around the world. Halal size market global for food is USD 560 billion and for food and non-food is USD 2.1 trillion per year (MARTRADE, 2011). This number show great opportunities for international business firm in various industry (Abdul-Talib & Abd-Razak, 2013). From previous study the increases of halal global market is influence by population of Muslim, and awareness of society toward halal products and services (Ratanamaneichat & Rakkarn, 2013; Mohd Janis, 2004).

Growing population of Muslim around the world is one of the factor that increase the demand of halal food and product because it can influence the behavior and culture of society. (Rajagopal, Ramanan, Visvanathan, & Satapathy, 2011). According to Pew Research Center (2015). The population of Muslim in the word by 2010 is 23.2%. Meanwhile in 2050 the population is estimated projected to 29.7% which show the largest percent of growing population among the others population of world religion. The effect of the increasing number of population of Muslims will influence the purchasing power and subsequently will affect the demand for halal foods (Izberk-Bilgin & Nakata, 2016).

Halal industry in Thailand began before 1949 when a Thailand company decided to export chicken to Kuwait but the client asked for halal food. At that time the Central Islamic Council of Thailand (CICOT) was founded under HM’ advisor and was conducted by Sheikhuh Islam. The halal status of products and services at that time was judged by Islamic scholar without halal authentication process and certification paper (Pakorn Priyakorn, 2017). Not until 1997 halal certificate papers were published and got approval from Sheikhul Islam. Under the Ministry of Industry which adopted the Codex Halal Standards as Thailand’s halal standards.

To become halal global hub a country must prime itself in terms of supporting infrastructure, technology and well trained human resources that capable handling issues and challenges that come (Ahmad, Yang, & Wan Abdullah, 2015). With the advancement of science and Technology in halal industry they are many aspects that ongoing improvement which is in products, manufacture, process, logistics and distribution (Earle, 1997). In addition there are technology that created or had improved in order to secure the halalan toyyiban and to assure the food security. The importance of science and technology in halal industry will be discuss in this paper with the role that become the results of this research.

1.2 The importance of science and technology towards halal industry

The uses of science and technology can enhance the competitiveness in halal industry. Competitiveness is important to create more share market in halal industry. The competitiveness among firm have different effect. On one side it can offer better opportunity to create more share market meanwhile on the other side

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6 Interview session with Director of Halal Standard Institute of Thailand, Assc. Prof. Dr. Pakorn Priyakorn on 16 Mei 2017

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it can be harm their future prospect and threatens their performances. However with this competitiveness it will cause advantages revolved around differentiating a product that are much better and relevant to customers. The competitiveness advantages do not tend to stay competitive advantages without significant effort.

In the perspective of worldwide marketplace, the top most issues that facing by halal foods firms in every place are competitive advantages. Competitive advantages is importance to halal food company to brings themselves into the right ways, facing non-stop challenges and assist to follow current changes of external and internal environment of business. However, competitive advantages will be harmful if they choose wrong strategies to be in operation. Country with the top ten ranking the world competitiveness show it is the most priority choices of establishing the halal food industry compared to others Muslim countries (Bohari, Wei Hin, & Fuad, 2013).

Science and technology are importance to verify whether the halal product in the market are guarantee reliable halal food for customer and to create trust for buyers for both domestic and international markets. Technology is mainly used in productions especially in factory. The uses of new technology through production can benefits lot to the producer when they can multiply the production with large scale. For example in processing, packaging, labeling, distribution and marketing. In addition, technology are rapidly changing the way of marketing which is through social media and digital economy. This kind of technology can decrease the gap of customer and retailer through gaining trust and create brand loyalty to their products. In halal industry creating a trust with halal logo become much easier with the help of internet to people in the world. Creating a halal brand can be effective tool for developing a national halal market (Evans & Syed, 2015).

Science and technology also importance to overcome the issue and challenges in halal industry. There are many issue regarding halal food when many consumer claimed that the food they take are not halal, contain porcine and alcohol, contaminated by haram and harmful ingredients and the process of manufacturing of product are not hygiene, safe and clean. The absence of haram ingredient sometimes cannot be seen by our naked eyes. It must be tested by modern technology and experiment analysis to detect haram ingredients and poisonous substances that harm human health. Furthermore with this technology we can decrease or control masbooh product in the market (Salahudin, Hamdan, & Ramli, 2015).

2.0 METHODS

Methods use in this research are document review and interview with selected expert. The document review were from several sources such as document reports, manual procedure, journals, newspaper, article and internet sources. To gather latest information and collect more data an interview in a team is conducted with selected expert from institution in Thailand such as Halal Science Centre, Chulalongkorn University (HSC), Halal Standards Institute of Thailand (HSIT), and Center Islamic Council of Thailand (CICOT).

3.0 RESULTS AND DISCUSSION

3.1 Role of science and technology

Role of science and technology are important to as a one of the factor that contribute to the development of halal industry. Mostly our world nowadays use technology a lot every day in our life. This paper specifically address four of the most notable role of science and technology that represent research and development, institution and society. The role of science and technology in halal industry that will discuss are: to conduct halal food analysis: for the verification of halal certification process; research and development and for further strategies with new technology.

3.1.1 To conduct halal food analysis

Halal food analysis is used to trace harmful substances in food especially porcine. To test haram substances laboratory test is should be applied. Science and technology knowledge were both used in this test. Through the development of biotechnology, they are several techniques using high technology.
analytical equipment that provide fast, robust and reliable detection and analysis. Laboratory analysis usually carried out to test specific haram ingredients in raw materials, half fabricates and final food products with several halal requirements. There are three methods that usually used for meat species detection and identification in food which is protein based method, DNA based method and animal fats composition (Van der Spiegel et al., 2012).

In Thailand there are laboratory to analysis and conduct experiment for halal products. The halal laboratory was initiated at Chulalongkorn University in 1994 and uplifted to be the Halal Science Centre (HSC) in 2004. According to Winai Dahlan (2017) HSC doing laboratory experiment that involved biochemical methodology for the test of food sample. Halal science center receive food sample from company to analyze it before all product can put forward for certification process. Before a raw material become new product and get into the market and reach the customers it must be documentation and interviewing the owner of the product before going to test to halal science laboratory analysis.

Figure 1 : The process of analysis of food sample before goes to halal science laboratory analysis

“This is halal forensic science. Before we send the product to inspect or analyses the halal or laboratory analysis we have to check the documentation first. And we also interview the personal concern details, the material of the products. So we go to halal forensic science”

(Winai Dahlan, 2017)

HSC’S Halal Forensics Science Laboratory are laboratory that specifically do screening for halal authentication of raw materials and products. They are biological methodology development for halal food analyzed here. Some of food sample and test were run in this laboratory are alcohol test by GLC, fatty acids by GLC,GC-MS/MS, porcine gelatin or collagen by spectrophotometer, LC-ESI/MS, volatile substances by Electric nose, porcine DG, MG by FTIR, heavy metals by ICP, animal DNA by rt-PCR, PGM, porcine protein by LC-TQ/MS and hormones by FTIR, LC-ESI/MS (Winai Dahlan, 2017).

3.1.2 For the verification of halal certification process
The role of science and technology in halal industry are to provided scientific justification and results of laboratory analysis to the Islamic scholar or Fatwa Commission or Sheikhul Islam in Thailand. In Thailand Sheikhul Islam is the Islamic authority religion that manage halal related matter. Thus they can clarify the status of the products supported by scientific laboratory with standarization (Fauzi & Mas’ud, 2009). A product is difficult to identify halal or haram status because it cannot be trace by our senses. With the

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7 Interview session with Ascc.Prof dr Winai Dahlan Founding Director of Halal Science Center, Chulalongkorn University on 16 Mei 2017.
development of technology halal tracing system is created for the scientist and researcher to make test or analysis of the food sample. As we know that there are many issue in identifying halal and haram of the ingredients of the product in the market. With recent technology all the issue regarding halal food and products status can be solve. The Islamic scholar will evaluate the status of halal of the product based on the result of the test from expert such as food technologist, chemist and veterinary (Salahudin et al., 2015).

Process certification of halal in Thailand involves three agency that is Centre of Islamic Council of Thailand (CICOT), Halal Standards Institute of Thailand (HSIT) and Halal Science Center (HSC). CICOT is a CICOT is the only institution that was given authority to approve halal logo and certificate, manage the other units that are related to halal issues and do inspection for halal product standard (Ghazali & Md. Sawari, 2014). In this process an audits and analysis of food sample is needed to make sure the food is halal and toyyib. Before an application go through the final steps it must undergo analysis process at HCS Chulalongkorn University. After a company submit application to CICOT, member of CICOT will proceed the application by doing some discussion and follow up with applicant. This process included the documentation, report, agreement before go to next steps. A sample of the product of applicant will be transfer to HSIT and HSC to be analyze. After all documentation and sample testing is pass officer in CICOT to approve the halal certificate. The picture below how certification process occur in Thailand through halal Thailand agencies HSC, HSIT and CICOT with the company that request halal logo and certification (Somchai Deejaroen, 2017 8).

3.1.3 Research and development

Halal industry has a wide range of products in the marketplace so research and development (R&D) play an important factor that could impact significantly on the future of the halal market trends. To enhance product, research process and development will help to expand the halal industry into the global market. Research and development is needed by the halal institution to trace any haram substances possibly adulterated in foods products. Science and technology were widely used in this area which we can say that every aspect of research in halal undergoing development and innovations especially in food industry. From raw material to product, packaging, labeling and logistic until it get to the hand customers.

HSC do research and development for innovations product like halal cleansing products and alternatives to replace haram substances. They tend to replace haram substances like alcohol in the vinegar to other halal substance. HSC laboratory also do make scientific innovation and produce products which are specifically produced to solve Muslim problem. For example they created the first world’s earth-based soap that practically easier for Muslim if they after they touch something deemed dirty such as pigs and dogs. (Winai Dahlan, 2017).

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8 Interview session with Dr Somchai Deejaroen, The Assistant Secretary of Halal Affairs, CICOT, 17 Mei 2017.
In addition, HSC activities are doing research and development for innovative product like halal cleansing products. Hal-Klean product is a clay cleansing liquid products that used for Islamic cleansing of all najs or filth according to Islamic law. Other than that innovation on food products like nutraceuticals which
also known as “Sunnah snack” made by habbatu sawda mix with wheat flour in order to enrich snack with herb for benefits of health. This snack is palatable and acceptable to consumer and patients because the microencapsulated habbatu sawda oils by drying technology for production of stable foods and snacks. Moreover in cosmeceuticals they manage to produce anti-acne cream with habbatu sawda seed extract that show ability in inhibition acne problems. Another products are sunscreen cream with contain 0.5% of habbatu sawda with 30% higher sun protecting factor (SPF) value compared to others.

Other than that innovations also occur in development of halal standards or standardization system for halal products and services. Halal standards are the most important element is to ensure the sustainability of the halal industry. HSIT is the institutions that control and manage halal standards system in Thailand. Thailand developed the Global Halal Management System (GHMS) which describe products, process and system in a detailed framework to meet current demand of the halal industry. This system is made based on Thailand standard halal THS24000:2552 that was developed by CICOT. The Thailand government also implemented the traceability systems. The system is a combination of the halal standards and food safety systems that link the halal information in the whole supply (Van der Spiegel et al., 2012).

Thailand also constituted one system known as Halal Assurance and Liability Quality System (HAL-Q) (Pakorn Priyakorn, 2017). HAL-Q is a quality management system to ensure halal and safety that conform to Halal Standard and to make supplier more responsible towards their halal product before consumed by consumer. The process of HAL-Q involves several procedures, namely the preparation of the necessary documents, courses and different training involving all levels (operators, managing director and his team as well as employees), consultation involving experts and providing advice relating to systems, documents and processes carried out at the factory for halal products and procedures to ensure the later assessment of the Auditor General of HSC in collaboration with members of the Islamic committee of Province (ICOPs) and CICOT (Saidpudin et al., 2015). HAL-Q is also supported with ICT programs for users to check the status of halal on a product only through mobile phones, using the associated application. In addition, e-commerce also helps halal industry because most of the entrepreneurs do not have a strategy and expertise in marketing halal products that have been produced (Abdullah et al, 2015).

3.1.4 Further strategies with new technology
Thailand is already take a holistic approach towards the development of halal industry in the future. With the development of technology Thailand proposed to move to “halal for all” concept. With the tougher competition ahead halal industry need urgent transformation. For instance the technology that will develop with the halal or to make a new halal market such as e-Halal market, e-ecosystem, fintech, Internet of Think (IOT) and cloud. These are what Thailand like to expand and explore in order to penetrate to global market. Thailand already have strong and best halal science center for research and development, then they need to boost a new approach with the advancement of technology in the future. For now Thailand aims for innovation in SME or halal startups aa well as in research and development (Pakorn Priyakorn, 2017).

4. CONCLUSION
The central issues discussed in this paper is the role of science and technology in halal industry. The current status of the halal industry in Thailand and the importance of science and technology were examined. This research shows that science and technology have their own role to halal industry in Thailand that very crucial to expand into global market. Science and technology are mostly needed to give verification in certification process of halal, to gain customers trust by undergoing laboratory analysis and making innovations in research and development and planning strategies in the future with the advancement of technology. Finally science and technology give a lots of improvement to halal industry in Thailand.
5. **ACKNOWLEDGEMENT**

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Interview:

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ABSTRACT

Maintenance is recognised as an important conservation activity in ensuring the survival of heritage buildings for future generation. Essentially, the knowledge of maintenance had shifted towards the sustainability framework, comprised of economic, societal and environmental parameter. In terms of environmental, low carbon repair became the main agenda in achieving a sustainable goal and this paper supports the growing agenda through ‘Green Maintenance’ concept and methodology. Primarily, this paper aimed at looking on the applicability of ‘Green Maintenance’ concept and methodology in assessing the low carbon repair for laterite stone structure based on their embodied carbon expenditure within the Historical City of Melaka, Malaysia, by focusing on St Paul’s Church structure. Additionally, this paper also provides highlights on the nature of maintenance, common techniques and material for laterite stone repairs of St Paul’s Church. It is found that the most sustainable repair techniques are influenced by their longevity of repair and the number of embodied carbon expenditure, represented by the value of Environmental Maintenance Impact (EMI) of ‘Green Maintenance’ modeling. The EMI relay the number of ‘true’ CO₂ emissions in every selection of laterite stone repair techniques in the selected maintenance period. It can be calculated through specific formulaic expression and calculation procedures of ‘Green Maintenance’ model evaluated within ‘cradle-to-site’ boundary of Life Cycle Assessment (LCA). Subsequently, the result of case study reveals that the quality of repair (workmanship), selection of material to deal with specific area of deterioration and material durability became other main variables to be considered in selecting the most sustainable repair on their maintenance.

Keywords: Environmental Maintenance Impact (EMI), Green Maintenance, Heritage Building, Life Cycle Assessment (LCA), Laterite Stones

1. INTRODUCTION

Globally, it is estimated that at least half of the buildings that will be used in 2050 have already been built. Undoubtedly, heritage buildings will constitute a significant portion of building stock all over the world (Levine et al., 2007). Statistically, Kamal et al., (2008) reported 39,000 historic buildings in Malaysia in 1992 and the number is expected to increase where English Heritage (2010) predicted that 1.5% of the buildings would be added into existing building stock in a year and 372,000 out of them was gazetted as listed buildings. This signifies that heritage buildings should be given eloquent priorities in any development of technology, documents, policies, tools and certification schemes towards the process of shaping a sustainable and better world.
Heritage building is different from contemporary buildings (Fielden, 2003), where Kamal et al., (2008) described it as buildings with collective value of historical and architecture or also known for its cultural significance. In Malaysia, UNESCO World Heritage also proclaimed George Town and Melaka as UNESCO World Heritage Sites (WHS) in 2008 for their Outstanding Universal Value (OUV) (Sodangi et al., 2013). This proclamation had brought conservation through maintenance to become an urgent agenda in Malaysian built environment. Prior to the nomination, Comprehensive Management Plan (CMP) was established, suggested that any alterations including maintenance should be done in a sustainable way. Then, it needs a practical tools in assessing the change in terms of design and material used specifically for laterite stone buildings that resembled magnificent buildings throughout the Historical City of Melaka (MBMB, 2008). This paper is also supporting the need of CMP.

Maintenance is now being largely accepted as a necessary activity in conservation (Sodangi et al., 2013). To date, the discussion of heritage building conservation particularly in maintenance and repair had shifted to innovative level towards sustainability. It revolves throughout the cost analysis to ensure meaningful benefit over the investment in maintenance project or a broad philosophical debate in conducting maintenance project such as least intervention, like for like material, honesty, integrity etc. (Bell, 1997). Both analyses are important to ensure high quality of intervention undertaken in heritage building’s fabric. However, there is also increasingly crucial to consider about how maintenance’s philosophical vs. cost-guided may beneficial to lessen the environmental impact (CO₂ emissions) while ensuring the survival of heritage buildings. Thus, ‘Green Maintenance’ concept and methodology in this paper support the sustainability agenda, call for the protection of the cultural significance embedded in the fabric of heritage building while preserving the other capital such as economy and environmental inclusively (Kayan, 2016). The concept takes philosophical factor, cost and low environmental impact factors into evaluation in a decision-making. The repair techniques utilised in maintenance intervention that comply with the three factors in Figure 1 will be considered as being the most sustainable.

Figure 1 ‘Green Maintenance’ Concept
Source: Forster et al., (2011)

To date, the needs for low environment impact are relatively associated with global warming augmented by generation of CO₂ emissions and resources depletion, which needs the full attention from experts, governments and public throughout the world. ‘Green Maintenance’ of heritage buildings offers a wide range of benefit associated with carbon mitigation options of embodied carbon expenditure in repair. Embodied carbon known as a ‘hidden’ carbon incurred in the process of raw material acquisition, transportation of material, processing and manufacturing of building (Giesekam et al., 2016) and calculating embodied carbon regards as a ‘ahead of the game’ in combating the environmental problem (De Wolf et al., 2017).
Statistically, material sector related with maintenance field accounts for 10% of total emissions with the proportion of 70% in the manufacturing of material and 15% associated with transportation of material (Weight and Rawlinson, 2007). Additionally, construction industry through maintenance consumes about 40% of globe’s stone, gravel and sand, quarried about 50-300 millions tonnes of material in each year (Chrisna et al., 2011). It is well known that the investment of energy in construction of heritage building had been made for a long time ago. Maintaining heritage building that aimed to double up the lifespan of building would also contribute to high environmental impact through the embodied carbon in repair. In the past, building materials is locally sourced, more economic and easily quarried such as laterite stone (Ashurt and Dimes, 2011). However, due to the scarcity of materials, local product is impossible to find and if like for like material repair strategies was emphasised by authorities, then outsourcing of material from other countries became a must. Further, the weight of materials would also influences the mode of transportation and fuel consumption then contributed different values of CO₂ emissions released to the atmosphere. The aforementioned impact referred to the recurring embodied carbon (energy) that will be reported in each maintenance intervention subjected to the longevity of repair (Dixit, 2010). The solution is needed to change the way we think about the problem, engages every players on how to understand the reduction of CO₂ emissions in built environment, turn into an informed decision analyses through ‘Green Maintenance’ concept and methodology.

Ideally, the understanding of longevity of repair and single impact over the arbitrary maintenance period represented Total Environmental Maintenance Impact (EMI) [calculated using simplified mathematical equation from Kayan (2013) in Equation 1] became important variable in selecting low carbon repair techniques in ‘Green Maintenance’ concept and methodology. The carbon footprint expanded in maintenance and repair within ‘cradle-to-site’ boundaries of Life Cycle Assessment (LCA) will be tested in the case study of laterite stone building (St Paul’s Church) in Historical City of Melaka, Malaysia.

2. ‘GREEN MAINTENANCE’ METHODOLOGY

‘Green Maintenance’ methodology sets out an insight on the relationship between maintenance and repair with CO₂ emissions in selecting the low carbon repair for heritage buildings. Figure 2 sets out the proposition in order to understand the relationship between each intervention that are characterized by its longevity (l) and embodied carbon expenditure (Ce) on the service graph condition (Kayan et al., 2017). The downward sloping signifies the decline condition of the buildings over the life cycle of repair. Each intervention is important to keep the buildings at the optimal service condition. Hypothetically, the more frequent of maintenance intervention, the greater embodied carbon expended (Forster et al., 2011). Thus, ‘Green Maintenance’ gives the preference to the repair technique that has high longevity, which subsequently incurred lesser number of repeating interventions and may incur lesser-embodied carbon expenditure over the life span of the building (Forster et al., 2013). Practically, however, there will be a single or combination of repair techniques in a certain maintenance period. Hence, high consideration on numbers of intervention needed over lifespan, type of repair and the embodied energy and CO₂ expended in repairs is paramount important in this evaluation (Kayan et al., 2017). Additionally, every intervention is also influenced by other variables including material durability, degree of exposure, building detailing, quality of repair and specification. For example, lesser durable material may not consume much energy during production, but it may require frequent replacement and resulting in higher total embodied carbon in maintenance.
Figure 2 Relationship between longevity of repair and embodied carbon expenditure
Source: Kayan (2013)

The total embodied carbon expended in the maintenance and repair is calculated through a simplified calculation procedure in following equation:

\[
\sum_{EMI} \text{cradle-to-site} = \text{Area repaired} \times \{ \text{Material used (t)} \times \text{Embodied Carbon Coefficient (ECC)} + \text{Material used (t)} \times \text{CO}_2 \text{emission factor} \times \text{Resourcing location (km)} \} \times \text{(Frequency of repair (n))/(100 year)}
\] (1)

To test, this study adopts a mixed method approach (quantitative as the core) where the case study approach was adopted. To quantify CO\textsubscript{2} emission from repair of St Paul’s Church, Melaka, Malaysia, there are several steps need to be followed illustrated in Figure 3:
2.1. St Paul’s Church Building Profile

St Paul’s Church is the oldest European building in Southeast Asia located on the summit of St Paul’s Hill, Melaka Historical City, Malaysia representing a network of Portuguese, Dutch and British colonials (see Figure 4). First built in the 1560s by Duarte Coelho and enlarged by Jesuits using laterite block as main building material. Historically, St Paul’s Church endured adaptive change of use from college to hospital. However, due to its prominent location, it had been converted into partially military function, as it became prime target of bombardment by Portugal’s enemies. Obviously, repairs need to be done in order to strengthen the structure by using Coral rock as filler between laterite stone during Portuguese’s era and Dutch brick (yellow coloured brick and plastered) during Dutch’s occupation (Khoo, 1998). After the establishment of Christ’s Church, St Paul’s Church was left as graveyard. The British continued with a military use during the their occupation until the demolition of the Melaka Fort. The church was neglected until a series of renovations led by the Melaka Historical Society in the 1930s (Tan, 2015). History show the capability of laterite stone as building material, standing nobly for more than 500 years, endure through conflicts and war. Present, the external wall of building tends to weather rapidly under tropical hot climate.

On construction of laterite part, Table 1 summarised the profile of laterite stones for St Paul’s Church exposed external wall part generated from site survey and mathematical calculation. It is believed that the laterite stones are locally sourced from Ilha das Pedros (Pulau Upeh, Melaka, Malaysia) and Cape Ricado (Port Dickson, Negeri Sembilan, Malaysia) where the fact can be seen on laterite cutting over the island, surrounding area and salvaged material from other buildings built by Portuguese and Dutch (Khoo, 1998). But, at the present day there are no active stone quarries within the area due to their closure (Ibrahim, 2007).

<table>
<thead>
<tr>
<th>Type of Stone</th>
<th>Laterite and Dutch Brick</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Wall Surface</td>
<td>Laterite 603.52m²</td>
</tr>
<tr>
<td>No. of stone blocks used</td>
<td>Dutch Brick 13m²</td>
</tr>
<tr>
<td>Size of Stone (mm/block)</td>
<td>Laterite 2,736 blocks</td>
</tr>
<tr>
<td></td>
<td>Dutch Brick 1,300 blocks</td>
</tr>
<tr>
<td></td>
<td>Laterite 700mm x 300mm x 300mm</td>
</tr>
</tbody>
</table>
Meanwhile, a great deal of lime required in St Paul’s Church. However, there is no exact proportion recorded in any maintenance document. Khoo (1998) distinguished two generations of concrete and mortar seen to cross-cut each other. The early mortar is composed of a lime and sand seen, thin layer in smooth rounded pebbles of laterite, some other material (e.g. coral, angular pieces of charcoal and exfoliating oyster shells). The later mortar is, in part better craftsmanship compared to early mortar. More evenly sorted sand matrix up to coarse but not granules as found in early mortar. However, the original structure also has been cemented by modern mortar (see Figure 5) that overprints the early and later mortar.

![Figure 5 Modern mortars for pointing](image)

For quantification, the proportion sets is 1:3 of limestones, sand for an early mortar, 1:1:2 of limestones, brick dust and sand for the later mortar (Matias et al., 2016), modern mortar referred to lime mortar materials used by Bastion Middelburg (according to guidelines underlined in the reconstruction of Bastion Middelburg = 1:1:3 limestones, white cement and sand). It is must emphasis that the nature of repair for St Paul’s Church is different from other laterite structure within the area of historical city of Melaka as several ordinary interventions happened between 2000 to 2012. In which, some of intervention with compliance to guideline, better documented due to establishment of Jabatan Warisan Negara in 2008 and some are not. ‘Green Maintenance’ concept and methodology in this paper serve the practical way for decision maker (conservationist and authorities) on selecting most sustainable repair strategies that deal with varied nature of maintenance.

### 2.2. Laterite Stones Repair and Scenario

Commonly, there are four (4) repair techniques, known as stone replacement, plastic repair, repeated repointing and pinning and consolidation that could utilise due to relative levels of intrusion to the original fabric. Several scenarios within arbitrary maintenance period could be considered as it may bring a number of benefits relating to the technical and philosophical aspect of masonry conservation. For example, repeated repointing on deteriorated mortar joints would have a limited effect on adjacent laterite structure. In contrast, the removal of deteriorated laterite stone and replacement with a new stone block unit logically requires removal of greater quantities of original fabric. It must be noted that certain combinations of laterite stones repair are more common than others. Stone replacement would be practically done only once, while a
plastic repair is commonly followed by natural stone replacement within a selected arbitrary maintenance period. Conversely, it would be highly unusual to replace the stone and then undertake a plastic repair within the same period (Kayan, 2013). From extensive communication with PERZIM, Jabatan Warisan Negara and verification process, it was identified three (3) repair techniques are mainly utilised, modeled with their Environmental Maintenance Impact (EMI) over 100 years based on previous literature (Forster et al., 2011). Laterite stone structure of St Paul’s Church had been built last for more than 500 years and yet still in good condition, thereby the average value of 100 years utilised in this paper found to be best estimation of longevity. Figure 6 shows the four (4) scenarios are defined for maintenance of 1m² of area for laterite stone structure over a study period of 100 years.

Figure 6 Repair Scenario and time frames
Adopted from Forster et al., (2011)

3. RESULTS AND DISCUSSION

From mathematical calculation procedure, Table 2 and Figure 7 shows the result of embodied carbon expenditure of 1m² and Total generated EMI of St Paul’s Church.

Table 2 Total Embodied Carbon (tCO₂e/t/m²) of repair scenarios within 100 years arbitrary period

<table>
<thead>
<tr>
<th>Scenari o 1</th>
<th>Scenari o 2</th>
<th>Scenari o 3</th>
<th>Scenari o 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stone replac ement</td>
<td>Rep eated repo intin g</td>
<td>Rep eated plast ic repair</td>
<td>Plastic repair, then stone replac ement</td>
</tr>
<tr>
<td>L:0.406</td>
<td>B: 0.015</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Number of intervention (n)</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total Average</td>
<td>L;</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Repeated Repointing</td>
<td>EMI</td>
<td>0.406</td>
<td>B; 0.015</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----</td>
<td>--------</td>
<td>-----------</td>
</tr>
<tr>
<td>kgCO₂e/m²</td>
<td>-</td>
<td>L; 0.063</td>
<td>B; 0.006</td>
</tr>
<tr>
<td>Number of intervention (n)</td>
<td>-</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>Total Average EMI</td>
<td>-</td>
<td>L; 0.252</td>
<td>B; 0.024</td>
</tr>
<tr>
<td>Plasti repair</td>
<td>kgCO₂e/m²</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Number of intervention (n)</td>
<td>-</td>
<td>-</td>
<td>3.33</td>
</tr>
<tr>
<td>Total Average EMI</td>
<td>-</td>
<td>L; 0.029</td>
<td>B; 0.003</td>
</tr>
<tr>
<td>Total Average EMI</td>
<td>0.421</td>
<td>0.28</td>
<td>0.032</td>
</tr>
</tbody>
</table>

Table 2 shows the average EMI for 1m² of wall for St Paul’s Church or known as functional units of embodied carbon per m² (CO₂e/m²/t). The value of functional unit will utilised in calculating the Total EMI of St Paul’s Church by multiply with the total external wall surface area 616.52m² of St Paul’ Church.
Figure 7 and Table 2 evidently showed that stone replacement has the highest embodied carbon expenditure either in 1m² and the Total Generated EMI over the wall surface (0.421 tCO₂e/t/m² per 1m² and 245.22 tCO₂e/t/m²) over 100 years of arbitrary maintenance period. Comparatively to repeated plastic repair that contributed to small amount of CO₂ emissions (17.55 tCO₂e/t/m²) over all interventions in the case study. In practice, the usage of plastic repair technique needs further intervention (e.g. stone replacement) due to its low longevity of repair denotes in Scenario 3, then lead to relatively high amount of CO₂ emissions (177 tCO₂e/t/m²) over the period of 100 years. In this technique, the area of deteriorated wall is important variable need be considered as the higher area need to be repair, more material is needed. Subsequently, lead to high CO₂ emissions. Considering about the workmanship, it is important to noted about the usage of cement based plastic repairs, clearly cheaper than other but technically incompatible will also limit the longevity. Based on the Total generated EMI in Figure 7, testing results also revealed that repeated repointing contributed to 152.402 of tCO₂e/t/m². Although it shows low initial embodied carbon per functional unit in 1m² in Table 2 compared to other scenario and techniques. Considering about the rule of thumb, it is essential to repointing the overall surface of the wall within the same period. The workmanship associated with thickness of pointing between 50mm to 100mm requires more lime mortar to be use, and then it may contribute to a significantly high amount of CO₂ emissions. Based on the overall discussion, testing ‘Green Maintenance’ methodology in determining the value of CO₂ emissions shows the total surface area of St Paul’s Church, longevity of repair and the workmanship give high influence in selecting the most sustainable repair technique in their maintenance.

Thus, it can be said, stone replacement is an ideal technique to be utilised due to its high longevity, able to deal with high area of deterioration. Theoretically, however, rigorous evaluation of stone replacement in the perspective of cost and philosophical is a must in considering this type of repair. It is well recognised that quarrying and processing (cradle-to-site) contribute to high environmental impact (English Heritage, 2007). Hyslop (2004) expounded on the selection of replacement is a challenging demand of the suitably matched, compatible with underlying substrate. Use of locally available and salvaged is priority, but due to the scarcity, inactive quarry (the production is no longer available) (Forsyth, 2007). Then the outsourcing activity is must and longevity of repair is important criteria to be evaluated in any case. In reality based on Table 1, it is understood that due to the scarcity of material, brick has been used to replace the deteriorate laterite, may lead to the philosophical debate e.g. like for like material, honesty. This subsequently demands meticulous view from experts on the ‘trade-off’ situation between the cost of loss in historic fabric and CO₂ emissions (Forster, 2010). Initially, honest intervention should need to be clearly seen in the fabric. However, overtime the blurring of the old and new fabric may occur as patination develops. In term of CO₂ emissions, however, the usage of salvaged material is emphasis to reduce the CO₂ emissions from transportation phase. Other case study conducted by Azizul (2015), imported laterite stone for the reconstruction of Bastion Middelburg from Prachinburi in Thailand (1,797km) is one of the highest impetus reasons in contribution of CO₂ emissions. Conversely, it is also found that the usage of salvaged material is not as easily incorporated in building practices that typically requires locating the source early, planning from the start of dilapidation surveys through conservation works. Sound salvaged should be carefully cleaned down, sorted to length and thickness and arranged in stacks corresponding to the various length (Ashurt and Dimes, 2011). In which, it perhaps can be obtained from various sources such as abandoned old buildings, demolished building structures,
building suppliers, salvage contractors and use-material dealers (Ramli and and Byrd, 2012). Then, the usage of moderate figure of Embodied Carbon Coefficient (ECC) is stressed for salvaged materials (Laterite and Brick) due to processing process (‘cradle-to-gate’). It is assumed that the salvaged materials need to be processed (re-cut) and transported in very short distance, logically applied to bigger scale of project.

4. CONCLUSION

In creating a better future, Green Maintenance’ model is proven to be a good approach in selecting the most sustainable repair in maintenance through generated embodied carbon expenditure for laterite stone repair of St Paul’s Church. Ultimately, it provides a sustainable solution in selecting repair options based on environmental point of view through the repair options that have low environmental impact of CO₂ emissions. Stone replacement is considered as sustainable repair technique rather than plastic repair, pointing and over a number scenarios (repeated plastic repair, repeated repointing and plastic repair + stone replacement). Even so, sustainable repair technique (stone replacement) suggested in the result needs further discussion on philosophical context. It is emphasised that the usage of compatible material will ensure the higher longevity rather the usage of new material due to its unknown durability. Subsequently, this paper can be utilised for a further discussion on compatible but imported material and incompatible but local sourced from short distance with variety scale of maintenance. It is recognised that stone replacement is costly due to material required and skilled labour (workmanship). Nevertheless, the cost will decrease with improvement of physical condition. It clearly demonstrates that if maintenance works is planned properly through ‘Green Maintenance’ concept and methodology, the cost could be reduced in longer period of time. Therefore, the number of total embodied from generated EMI enables decision maker to facilitate deeper analysis between philosophies, cost and discuss it against carbon emission. ‘Green Maintenance’ needs to be continuing produce a rigorous evidence case of low carbon building, present the evidence in accessible language to develop wider understanding in academia and industry.

5. ACKNOWLEDGEMENT

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SUCCINATION OF GUAR GUM FOR USE AS NATURAL POLYMER ELECTROLYTE

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ABSTRACT
Polymer electrolytes of natural resources are attractive because they are renewable, biodegradable, abundantly available and therefore is relatively cheap to their petroleum-based counterparts. However, in its native form, most of the natural polymers are highly crystalline and insoluble in most aprotic solvents. Solubility of polymer is a critical factor in developing polymer electrolytes. In this work, guar gum succinate (GGS) was chemically modified via esterification by reacting guar gum with succinic anhydride in the presence of 4-dimethylaminopyridine. The formation of GGS was confirmed by Fourier transform infrared (FTIR). X-ray diffraction (XRD) showed that the GGS is more amorphous in nature than the neat guar gum, thus it is an interesting potential candidate to be used as polymer electrolyte.

Keywords: Polymer electrolyte; Guar gum; Succinate; Natural polymer

1. INTRODUCTION
Environmental pollution from the massive load of non-degradable waste from synthetic polymer electrolytes has attracted scientific and practical interest in biodegradable polymer as host material. In parallel with the demand for energy and environment, the exploration of biopolymers as greener alternatives for the petroleum-based polymer has undergone rapid development. Fabrication of electrochemical devices by using natural solid polymer electrolyte (SPE) has been extensively carried out to produce low cost and sustainable energy source. Various types of natural polymers derived from plant have been experimented as polymer electrolyte. Among natural polymers, polysaccharides is the best candidate due to their abundance in environment, for example including n-phthaloylchitosan-based gel polymer electrolyte (GPE), phthaloyl starch-based GPE and agar-based SPE (Yusuf et al., 2016; Selvanathan et al., 2017; Selvalakshmi et al., 2016). Guar gum, also called guaran is a natural nonionic polysaccharide extracted from refined endosperm of galactomannan. In this study, guar gum is modified through succination as an approach to suppress guar gum crystallinity. This natural polymer is attractive as polymer electrolyte because it is principally biodegradable.
2. METHODS

2.1. Chemicals
Guar gum, succinic anhydride (SA) and 4-dimethylaminopyridine (DMAP) were procured from Sigma-Aldrich. All materials are used without further purification. All remaining chemicals used were of analytical grade.

2.2. Synthesis of Guar Gum Succinate (GGS)
The synthesis was carried out similar to that of Seeli et al. 2016 with slight modification. The GGS was prepared by reacting 1% (w/v) guar gum aqueous solution with various amounts of SA in presence of DMAP. The solution mixture was mechanical stirred at room temperature for 24 h. The formed product was neutralized with sodium hydroxide solution. The product was precipitated with ethanol, filtered and dried under vacuum. The precipitate was dialyzed against distilled water using cellulose membrane tubing to remove the impurities and unreacted materials. Thereafter, the product was re-precipitated with ethanol, filtered, dried again under vacuum and stored in desiccator until further use.

<table>
<thead>
<tr>
<th>Designation</th>
<th>GG: SA (mmol)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GGS_1</td>
<td>1:1</td>
</tr>
<tr>
<td>GGS_7</td>
<td>1:7</td>
</tr>
<tr>
<td>GGS_14</td>
<td>1:14</td>
</tr>
</tbody>
</table>

3. RESULTS AND DISCUSSION

3.1. Succination of Guar Gum
The guar gum was modified via succination, as shown in Scheme 1. The succination occurs mostly at C-6 position. Even though secondary hydroxyls are also sites for substitution, the primary C-6 hydroxyl position is highly active (Mudgil et al., 2012). The succinate groups in GGS disrupt the arrangement of crystalline structure of guar gum, making it more disorder and hence making it more amorphous. This modification also improves GGS solubility in water (Iqbal et al., 2016).

Scheme 1 Succination of guar gum
3.2. FTIR analysis
The introduction of succinate group into the guar gum molecules is confirmed by appearance of two new peaks in GGS spectra as shown in Figure 2. The new peaks at 1724 cm\(^{-1}\) corresponds to stretching vibrations of carbonyl group of the ester linkage and at 1572 cm\(^{-1}\) due to unsymmetrical stretching of carboxylic anion. The intensities of both peaks are increased as the guar gum to SA feed ratio increases during the reaction, in agreement with previous literature reported (Seeli et al., 2016).

The FTIR spectrum of guar gum shows characteristic peaks such as a broad OH stretch absorption between 3600 and 3100 cm\(^{-1}\). Absorption band at 2923 cm\(^{-1}\) (guar gum) indicates aliphatic C-H stretch. In addition, band at 1640 cm\(^{-1}\) belongs to COO- symmetric stretching. The absorption bands that appear between 1200 cm\(^{-1}\) and 800 cm\(^{-1}\) represent the highly coupled C-C-O, C-OH and C-O-C stretching modes of the polymer backbone (Mudgil et al., 2012). Major absorption bands of C-O-C stretching vibrations of glycosidic linkages appear at 1015 cm\(^{-1}\) and 870 cm\(^{-1}\).

The OH stretch absorption peak of guar gum at 3304 cm\(^{-1}\) has shifted to 3343 cm\(^{-1}\) in GGS. This is due to extent of hydrogen bonding. Presence of succinate group disrupts the intermolecular hydrogen bonding in the polymer chain of guar gum. The intensity of the peak has also decreased, representing the portion of hydroxyl group of guar gum that have been substituted with succinate group, mostly at C-6 position.

![Figure 2 FTIR spectra of a) guar gum, b) GGS_1 c)GGS_7, d)GGS_14](image)

3.3 XRD Analysis
Figure 3 shows the characteristics peak of guar gum at 17.46\(^{\circ}\) and 20.28\(^{\circ}\) (2\(\theta\)) with relative intensities of 75 and 100, in agreement with previous literature (Seeli et al., 2016). In GGS, peak at 17.46\(^{\circ}\) has diminished and peak at 20.28\(^{\circ}\) has decreased in intensity, indicating that the GGS has become more amorphous. In addition to the characteristics peak, new peak at 43.42\(^{\circ}\) was also observed. The succinate group has substituted some of the hydroxyl groups on the guar gum, mostly at the C-6 position upon the succination. The presence of the succinate group disrupted the intermolecular hydrogen bonds between the polymer chains of guar gum, making the ordered crystalline structure of guar gum has become more disordered, thus resulting in more amorphous structure.
4. CONCLUSION

GGS was successfully synthesized and its structure has been verified via FTIR spectroscopy by the appearance of two major new peaks at 1724 cm\(^{-1}\) and 1567 cm\(^{-1}\). The XRD analysis showed that the intensity of peak 20.28° (20) has decreased and peak 17.46° (20) has diminished proving that the GGS is more amorphous than the neat guar gum.

5. ACKNOWLEDGEMENT

The authors acknowledge the funding received, FRGS (FP052-2016) from the Malaysian government. We thank Vidhya Selvanathan, Cheyma Naceur Abouloula and Ahmad Danial Azzahari for the help at the laboratory.

6. REFERENCES


Figure 3 XRD diffractogram of guar gum and GGS.
SUSTAINABLE ROLLER-COMPACTED CONCRETE PAVEMENT – A NEED FOR DEVELOPING COUNTRIES

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ABSTRACT

Concrete is the most widely used synthetic material in the world but it is also a significant source of greenhouse gas emissions. Like any manufacturing process, the production of cement used in concrete results in large amounts of carbon dioxide emissions. Therefore, introducing a substitution for cement is on the hunt for the most effective and efficient way to develop cost-effective green concrete. Among different kinds of concrete, Roller Compacted Concrete Pavement (RCCP) is an ideal medium for recycling waste or industrial byproducts. RCCP due to high potential capacity for using waste materials in its mix proportion is environmentally friendly concrete. In this study, the possibility of using waste materials as cement replacement in RCCP is investigated. The study concluded that the high-strength RCCP could be produced with incorporating Fly ash, Ground-granulated blast-furnace slag and Rice husk ash by 50%, 40% and 20% as cement replacement, respectively.

Keywords: Roller Compacted Concrete Pavement; Sustainable construction; Supplementary cementitious materials; Maintenance

1. INTRODUCTION

Concrete pavements have been used for highways, airports, streets, local roads, parking lots, industrial facilities, and other types of infrastructure. When properly designed and built out of durable materials, concrete pavements can provide many decades of service with little or no maintenance. A sustainable approach to construction places a greater focus on long-term affordability, quality and efficiency (Nagalakshmi, 2013). Sustainable concrete needs to have very low inherent energy demand, be produced with minimum waste, be made of the most common resources in environment, have long lasting structures, have a high thermal mass as possible and be made with recycled and reusable materials (Naik, 2008).

Cement industry is one of the primary producers of carbon dioxide. The CO₂ emission from the concrete production is directly proportional to the cement content used in the concrete mix; 900 kg of CO₂ are emitted for the fabrication of every ton of cement, accounting for 88% of the emissions associated with the average concrete mix (Babor et al., 2009). It is very vital to identify a substitution for cement or non-renewable material such as granite to make a more cost effective and environmental friendly concrete, because annual production of more than 10 billion tons of concrete has made it the most essential construction material (Shafigh et al., 2014).
The production of waste materials is an unavoidable stage of all industrial and human activities. This waste is now creating big environmental and economic problems all over the world. As a nearly inert material, concrete is an ideal medium for recycling waste or industrial byproducts (Delatte, 2014). Many materials that would end up in landfills can be used instead to make concrete. Fly ash (FA), Ground-granulated blast-furnace slag (GGBFS) and Rice husk ash (RHA) are among materials that can be included in the recipe for concrete and further enhance its appeal. Using waste material such as FA, GGBFS and RHA as cementitious materials can potentially lead concrete industry into more green and sustainable industry which is able to reduce the pollution of gases emissions. From various kinds of concrete pavement, high potential capacity of Roller Compacted Concrete Pavement (RCCP) for using waste materials in its mix proportion is reported by researchers (Brito & Saikia, 2012). RCCP is a friendly pavement material to incorporate by-products of industries. RCCP is an attractive alternative to conventional road construction due to it is relatively easier to produce and more economical. RCCP requires low maintenance because it resists rutting and deformation under heavy loads and resists freeze-thaw damage (Liu et al., 2014). This pavement have been proven to be very economical for construction (Delatte, 2014). According to economical perspective, the initial construction costs of RCCP are approximately 30% lower than the conventional asphalt pavements and about 10–20% lower than that of the conventional Portland cement concrete (Modarres & Hosseini, 2014). This study is an attempt to develop a cost effective and eco-friendly concrete pavement by reviewing waste materials usage in it.

2. WASTE AND BY-PRODUCT MATERIALS AS CEMENT REPLACEMENT

2.1. Fly ash

Various mineral admixtures such as FA are used in order to improve some engineering properties of concrete and to reduce its cost (Bentz & Ferraris, 2010). FA is the residue collected from burning smoke flue. It consists of much unfixed SiO$_2$ and Al$_2$O$_3$, and hence possesses comparatively high potential activity (Cao et al., 2000). The main useful effect of FA in concrete consists of three aspects, often called morphologic effect, pozazzolanic effect, and micro aggregate effect (Cao et al., 2000). The pozzolanic effect is the main effect of FA, which states that the unfixed SiO$_2$ and Al$_2$O$_3$ in FA can be activated by Ca(OH)$_2$ product of cement hydration and produce more hydrated gel (Cao et al., 2000). The specific gravity of FA may vary from 1.3 to 4.8 (Joshi & Lohita, 1997). FA mainly consists of silt-sized particles (particle diameter <45 micrometer), which are generally spherical in shape.

There are different types of FA, including Class F and Class C, generated by burning black coal and brown coal, respectively. Class F FA, is generally low in lime, less than 15%, and contains greater combination of SiO$_2$, Al$_2$O$_3$, Fe$_2$O$_3$ (more than 70%) compared to Class C FA. Class C FA normally comes from coal which produces an ash with higher lime content, generally more than 15%, often as high as 30% (Gamage et al., 2013). FA production has increased up to 900 million tonnes per year by 2008 and it is anticipated to increase up to about 2000 million tonnes in year 2020 (Gamage et al., 2013; Malhotra, 2008). Every year millions of tonnes of FA are produced across the world, with India producing 80 million tonnes per year of the total production, however, only less than 10% is being utilized. As a result, the majority of the FA is finding its way to landfill (Yerramala & Babu, 2011; Siddique, 2003). Most of the RCCPs mixtures used by the U.S. Army Corps of Engineers contained either Class C or F FA (Ragan, 1988). It was found that FA can be used in high volumes (e.g., 50–80% by mass of the binder) in RCCP (Yerramala & Babu, 2011). The use of RCCP containing high volumes FA could be a prudent option for the infrastructure development (Yerramala & Babu, 2011). In general, the use of FA in RCCP reduce the cost, make it easier to compact and decrease the heat of cement hydration (Chun et al., 2008).

2.1.1. The effect of non-standard and standard class F fly ash on properties of RCCP

Atis (2005) has studied properties of RCCP containing high volume FA which were collected from two different sources. The FA collected from the Drax power station could be classified as standard type F based on ASTM-C618. However, the FA collected from the Aberthaw power station could be considered as non-standard FA due to the remains of the Aberthaw FA on the 45-µm sieve and the loss on ignition (LOI) value.
that were 22.50% and 15.60%, respectively. Both of these FAs were used as 50% and 70% cement replacement in a control mix containing 400 kg/m³ ordinary Portland cement. The compressive strengths and Flexural tensile strength of RCCPs containing 50% (RCCP1) Drax FA were comparable or higher than the strength of the control mix at all ages. However, those values were lower than control mix for specimens containing 70% (RCCP2) Drax FA at all ages. The compressive strengths of concrete containing 50% (RCCP3) and 70% (RCCP4) Aberthaw FA was lower than the strength of its counterpart equivalent concretes made with Drax FA. The compressive strengths of RCCP3 were lower than the strength of control mixtures, however, it developed satisfactory at 28 days and high strength at one year. It is considerable that Aberthaw FA could be used in the concrete up to 50% as cement replacement. The mechanical properties of RCCPs containing 50% FA (Drax FA and Aberthaw FA) were higher than RCCPs containing 70% FA at all ages. Figures 1 and 2 indicate the mechanical strengths of RCCPs.

Figure 1 The effect of different contents of FA on the compressive strength of RCCPs (Atiş, 2005) Figure 2 The effect of different contents of FA on the flexural strength of RCCPs (Atiş, 2005)

Cao et al. (2000) reported the results of compressive and flexural tensile strengths of RCCPs containing 45% to 95% FA. Figures 3 and 4 show the mechanical strength of RCCPs with 3, 7 and 28 days curing age. As can be seen, the compressive and flexural strengths of RCCPs containing 45% to 95% FA (RCCP11, RCCP12…RCCP16) are lower than control mix at 3 days. However, the strength of specimens containing 45% and 55% FA (RCCP11, RCCP12) were still acceptable at 3 days. It shows, the FA effect is negative at 3 days. At 7 days, the compressive strength of RCCP11 and RCCP12 were comparable or higher than control mix. It is considerable that the rate of strength gain of RCCPs containing FA is much greater than control mixture. It means, the positive effect of FA is tangible after 7 days curing age and the strength of RCCPs developed significantly with longer curing age. Finally, after 90 days curing age, the compressive strength of RCCPs containing 45% to 95% FA were comparable or higher than control mix. In addition, the flexural strength of RCCPs containing 45% to 95% FA were higher than control mixture. The results show that the positive effect of FA was more beneficial for flexural strength.
Figure 3 The effect of different contents of FA on the compressive strength of RCCPs (Cao et al., 2000)

Figure 4 The effect of different contents of FA on the flexural tensile strength of RCCPs (Cao et al., 2000)
2.2. Ground Granulated Blast Furnace Slag
GBFBS is an industrial and a by-product of iron material. It formed by molten iron slag from a blast furnace, when it chilled and immerse in water to get a glassy material. Then a glassy produced material dried and ground into a fine powder. Table 1 shows a comparison of the composition of a typical GGBFBS and a typical Type I Portland cement.

<table>
<thead>
<tr>
<th>Chemical Constituents</th>
<th>Type I cement</th>
<th>GGBFS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SiO₂</td>
<td>21.1</td>
<td>40</td>
</tr>
<tr>
<td>Al₂O₃</td>
<td>4.6</td>
<td>13.5</td>
</tr>
<tr>
<td>CaO</td>
<td>65.1</td>
<td>39.2</td>
</tr>
<tr>
<td>MgO</td>
<td>4.5</td>
<td>3.6</td>
</tr>
<tr>
<td>Fe₂O₃</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td>SO₄</td>
<td>2.8</td>
<td>0.2</td>
</tr>
<tr>
<td>L.O.I.</td>
<td>1.4</td>
<td>0</td>
</tr>
</tbody>
</table>

2.2.1. The effect of GGBFS on time span between mixing and compacting of RCCP
Dasmehe et al. (2000) studied on 15, 45, 60, 90, 120 and 150 min time span between beginning of mixing and compacting in RCCP specimens. Dasmehe et al. (2000) reported that by prolonging the time span between mixing and compacting, the mechanical properties of RCCP specimens have been changed in different modes. In other word, the mechanical properties of RCCPs sometimes have not changed, sometimes got better and sometimes got worse. In other research, Gharavi. (2003) studied on 15, 30, 45, 60, 90 and 120 min time span between beginning of mixing and compacting in RCCP. Gharavi. (2003) reported by increasing or decreasing time span between mixing and compacting, the strength of RCCP will be decreased. Finally, Gharavi. (2003) concluded there is an optimal delay time between mixing and compacting of RCCP.
In other study, Karimpour (2010) mad two mixtures containing 150 and 210 kg/m³ cementitious materials. Karimpour (2010) replaced 25%, 50% and 75% of cementitious materials with GGBFBS. He used 30, 60, 120 and 180 min time span between mixing and compacting. It is reported that three stages for compressive strength with increasing time span between mixing and compacting. At first, by increasing the time span, the compressive strength did not change, then it increased and reached the peak of point. Afterward, compressive strength decreased. This process is due to different stages in cement hydration. Compacting before the crystallized net forming, does not have any effect on strength. While, compacting when the crystallized net is being forming, causes to increase the strength. However, compacting after the formation of crystallized net, causes to decrease strength. Karimpour concluded by
increasing GGBFS in RCCP, maximum compressive strength occur in long time; in other words, it needs more time to reach peak point. Consequently, this delay can be used to provide more time to work with RCCP.

2.2.2. The effect of GGBFS on the mechanical properties, abrasion resistance and Ultrasonic Pulse Velocity of RCCP

Krishna Rao et al. (2016) assessed the effect of GGBFS on the mechanical properties and abrasion resistance of RCCP. Krishna Rao et al. (2016) reported replacement of GGBFS as cement in different contents, decreased strength values of RCCPs at early ages (by 3 days). However, at 7 days and 28 days the strength values increased significantly higher than control mix up to 50% replacement of GGBFS. In addition, the strength values of RCCPs containing 60% GGBFS developed higher than control mix after 28 days. Also, they reported that increasing GGBFS has increased abrasion resistance of RCCP at all replacement level. In other study, Krishna Rao et al. (2016) studied on Ultrasonic Pulse Velocity (UPV) testing that conducted on RCCPs containing GGBFS. The amount of GGBFS was changed in variety of 0% to 60% as cement replacement. The range of UPV qualitative rating varies from 3 to 4.5 Km/s (IS 13311). For excellent quality concrete, good quality concrete and medium quality concrete the UPV must be more than 4.5 Km/s, varying between 3.5-4.5 Km/s and between 3.0–3.5 Km/s, respectively. It was good for all RCCPs with GGBFS at first 24 hours, while the quality value improved from good to excellent from 3 days. The UPV for RCCPs with 40% GGBFS replacement was reported the highest in comparison with other mixtures. So, 40% GGBFS was reported as optimum cement replacement in RCCP. It should be noted that the good relationship between compressive strength of RCCPs containing 40 to 60% GGBFS and UPV had proposed.

2.2.3. The effect of fineness of GGBFS in compressive strength of RCCP

Omid and Iman Makhdom (2013) investigated the effect of components fineness of GGBFS on strength efficiency of RCCP. The fineness of GGBFS has been reported as vital parameter. In this study, slag with two fineness of 1500 cm²/g and 2850 cm²/g were used. Omid and Iman Makhdom (2013) reported a more improvement in compressive strength of RCCPs which made with slag fineness of 2850 cm²/g in comparison with slag fineness of 1500 cm²/g at all ages. This result is in agreement with study which has been done by Binichi et al. (2007). This study proved that increase in fineness of GGBFS causes more pozzolanic activity for GGBFS.

2.3. Rice Husk Ash

RHA is a by-product material from the combustion of rice husk. The ash content is about 18-22% by weight of the rice husks. India is the major rice producing country and its annual paddy production for the year 2014 has been calculated as about 154.5 million tonnes, which produces approximately 31 million tonnes of rice husk that is quite very high (Alex et al., 2016). Rice husk consists of about 40% cellulose, 30% lignin group and 20% silica and hence the ash contains a large amount of silica (Chindaprasirt et al., 2007). The reactive RHA can be used to produce good quality concrete with reduced porosity and
reduced Ca(OH)$_2$. The potential use of RHA has been investigated by some researchers. It has been used, successfully as active filler in hot mix asphalt and as cement replacement in conventional concrete mixtures (Rahman et al., 2014). Some researchers have shown that concrete made with RHA as a partial cement substitute to levels of 10% to 20% by weight of cement has superior performance characteristics compared to normal concrete (Alvarez, 2006; Habeeb & Mahmud, 2010). Also, it has been used in such applications as RCCP (Coutinho, 2003; Kajorncheapunngam & Stewart, 1992; Villena et al., 2011).

RHA resulting from the burning of rice husks at control temperatures have physical and chemical properties that meet ASTM Standard C 618-94a. Chemical compositions of RHA are affected due to burning process and temperature. Silica content in the ash increases with higher the burning temperature. At burning temperatures of 550$^\circ$C – 800$^\circ$C, amorphous silica is formed, but at higher temperatures crystalline silica is produced (Alvarez, 2006). Past researches have shown that the quality and quantity of silica in RHA can significantly change the properties of concrete (Mehta, 1978; James & Rao, 1986; Mehta & Montiero, 2006). It should be noted, ASTM C618:2003 restriction, i.e. for a material to be classified as pozzolan, it should have SiO$_2$ minimum of 70% and loss of ignition (LOI) a maximum of 6%.

2.3.1. The effect of RHA in RCCP

Modarres and Hosseini (2014) worked on RCCP containing RHA as cement replacement at varying amounts of 21% and 36%. Using RHA (at 700 $^\circ$C ignition temperature) as cement replacement in RCCP resulted in (1) increased optimum moisture content because of the cancellous structure of the RHA and reduced the maximum dry density (2) replacement of 21% RHA as cement had positive effects on the material’s flexibility, while the energy absorbency of material decreased by increasing the RHA content by 36% (3) the RCCP mix with 21% RHA had comparable fatigue life to conventional RCCP. However, increasing the RHA by 36% had negative effects on the fatigue behavior of RCCP. Therefore, the addition of RHA by 21% showed positive results in RCCP.

In another study Villena et al. (2011) assessed the application of RHA in RCCP as aggregate replacement. In this study 5% RHA on a mass basis was used. They reported addition of RHA lead to significant improvement in RCCP. Replacement RHA as aggregate caused greater optimum moisture and water demand. Replacement 5% RHA as aggregate in RCCP lead to significant improvement in RCC’s mechanical strength. The compressive strength, flexural strength and modules of elasticity increased by more than 135%, 60% and 70%, respectively. In addition, using 5% RHA as aggregate decreased the usage of cements and lead to decrease in the quantity of necessary mineral aggregates in RCCP. It should be noted, the consumption of RHA in the construction of RCCP in rice producing region can contribute to the environmental management of the rice production’s commodity chain.

3. CONCLUSIONS

The published research literature shows the environmental compatibility of RCCP due to its high capability to incorporate waste materials. From the review of published research work, it is
concluded that fly ash, ground-granulated blast-furnace slag and rice husk ash are the potentially viable materials to be used as cement in the production of RCCP by 50%, 40% and 20%, respectively.

4. REFERENCES


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A PERIODIC DFT STUDY OF WATER AND AMMONIA ADSORPTION ON MN-DOPED ANATASE TiO2 (001) SURFACE

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ABSTRACT:

Mn/TiO2 is of high activity for low temperature selective catalytic reduction (SCR) of NO with NH3. We know that the ammonia adsorption on the surface of catalyst plays an important role in SCR reaction. And the H2O molecular can lead to the deactivation of Mn/TiO2 catalyst. In this paper, water and ammonia adsorption mechanisms on Mn-doped anatase TiO2 (001) surface are studied by means of periodic DFT approach. Ammonia molecular and dissociative adsorption energies are found to be \(-34.8\text{ kcal/mol}\) and \(-46.1\text{ kcal/mol}\), respectively. And the molecular and the dissociative adsorption energies for water are calculated to be \(-51.3\text{ kcal/mol}\) and \(-44.8\text{ kcal/mol}\), respectively. The results can explain the reason for Mn/TiO2 catalyst deactivation caused by water.

Keywords: DFT; Mn/TiO2 catalyst; Water; Ammonia adsorption

1. INTRODUCTION

NOx is one of the pollutants emitted from the combustion process of fossil fuels, which can bring about some environmental problems such as acid rain and photochemical smog [1, 2]. And the selective catalytic reduction (SCR) process has been proven as an effective method for eliminating NOx. Many researchers have reported that Mn-based catalyst was of excellent low temperature performance for SCR reaction [3-6]. It is well recognized that the adsorption of NH3 molecular on catalyst played an important role in SCR reaction. The previous study indicated that NH3 can be adsorbed on the surface as NH4+ or as a molecular NH3 in the case of Bronsted acid sites and Lewis acid sites [7, 8]. Therefore, we investigate the ammonia molecular and dissociative atoms (NH2 and H) adsorb on the catalyst surface in this study. It has been proven that water has a poisoning effect on SCR catalyst [9], but the theoretical mechanism of water poisoning effect has not been reported in the literatures. Thus the adsorption of water molecular and dissociative atoms (OH and H) on the catalyst surface is also studied in this work.

Anatase phase TiO2 is widely used as catalyst support because of its chemical stability, low cost and non-toxicity [10-12]. A number of researchers have proposed that that the minority (001) surface is more reactive in catalytic reaction [13-16]. Erdogan et al. [17] investigated the water and ammonia adsorption mechanisms on anatase TiO2 (001) slab surface by means of periodic DFT approach. They found that the molecular and the dissociative adsorption energies for water were \(-15\text{ kcal/mol}\) and \(-32\text{ kcal/mol}\), respectively. The adsorption energy and the dissociative adsorption energy for ammonia molecular adsorption energy were \(-25\text{ kcal/mol}\) and \(-20\text{ kcal/mol}\) respectively.

Du et al. [18] have investigated the effect of water vapor on the performance of a Ce-Cu-Ti oxide SCR catalyst by experimental and theoretical studies. And in that paper, they used copper and cerium atoms instead of titanium atoms for the theoretical studies. Similarly, they used cerium atom substitute titanium atom as catalytic model for Ce-Ti oxide catalyst [19]. In addition, the XRD patterns of catalyst
revealed the strong interaction between Mn and Ti, so we replace Ti atom of anatase (001) with Mn atom to simulate the catalyst.

The purpose of the study is to theoretically investigate adsorption of H2O and NH3 on Mn-doped TiO2 anatase (001) surface by using a periodic slab model density functional theory (DFT) approach.

2. COMPUTATIONAL METHOD AND SURFACE MODEL

All periodic DFT calculations were performed with Materials Studio (MS) Modeling DMol3 from Accelrys (version 6.0). Four layer p (2x2) anatase TiO2 (001) slab is used to the calculation and all atoms are relaxed. The Mn atom replaces the top layer of the middle Ti atom in our work (Fig.1). The double-numerical plus polarization (DNP) functions and Becke exchange [20] plus Perdew–Wang approximation [21] nonlocal functions (GGA-PW91) were used in all calculations. DFT Semi-core Pseudopots (DSPP) treated with the core electrons [22]. The real space cutoff radius was maintained as 5.2 Å. A Monkhorst-Pack grid of size of (4x4x2) was used to the surface Brillouin zone of the whole systems. A 25 Å vacuum layer in the z-direction was used to avoid interactions of the surfaces. The convergence criteria for energy and displacement of geometry optimization were set as 1x10-5 Ha and 5x10-3 Å, respectively. Adsorption energies (Eads) of adsorbates on the clean surfaces are calculated as follows:

\[ E_{\text{ads}} = E_{\text{adsorbate/surface}} - (E_{\text{adsorbate}} + E_{\text{surface}}) \]  

where \( E_{\text{adsorbate/surface}} \) is the total energy of the same molecule adsorbed on surface. \( E_{\text{adsorbate}} \) is the energy of the isolated molecular (H2O or NH3) in the vacuum. \( E_{\text{surface}} \) is the energy of the Mn-doped anatase (001) surface. Note that a more negative adsorption energy corresponds to a stronger binding of molecular on the surface.

Figure.1 4 layer p (2x2) Mn/TiO2 anatase (001) surface

3. RESULTS AND DISCUSSION
3.1. **NH₃ adsorption on Mn-doped anatase (001) surface**

The first step of SCR reaction is ammonia adsorption on the catalyst. And for the adsorption reaction studies of small molecules (NH₃, H₂O), the Mn atom and surface oxygen atom are used as the catalytic active sites of Mn/TiO₂ catalyst, as illustrated in Figure. 2 and Figure. 3. It is obvious that the surface is slightly changed after adsorbing ammonia molecular, which is mainly caused by the change of oxygen atoms. By using periodic DFT approach, adsorption energy for ammonia molecular on Mn-doped anatase TiO₂ (001) surface model can be calculated from Eq.(1), and the value is -34.8kcal/mol. It has been reported that the adsorption energy for molecular ammonia on pure anatase TiO₂ (001) surface is −25 kcal/mol [17]. Thus it can be concluded that ammonia molecular is tightly adsorbed on the Mn atom. That is why the Mn/TiO₂ catalyst has excellent performance in SCR reaction. Figure. 2 illustrates the optimized geometry of this reaction. The distance of N-Mn bond is 2.059 Å, which means that N atom and Mn atom form a bond with each other.

![Figure. 2 NH₃ molecular adsorbs on Mn-doped anatase TiO₂ (001) slab model. a) Original structure b) Optimized geometry structure](image)

For the case of dissociative adsorption process, the calculated adsorption energy is -46.1kcal/mol. Figure.3 shows the optimized geometry of this interaction and the length of N-Mn bond. The distance of N-Mn bond is 1.920 Å, which is a little shorter than the length of N-Mn in Figure.2b) (2.059 Å). So the values of bond length agree well with the adsorption energy. The O atom of H-O bond seriously changed after optimization, and it can be found that the adsorption of dissociative ammonia occurs at Mn atom and form a bridge with an adjacent O atom (Figure. 3 b)). In addition, the lengths of N-Mn, N-H, O-H bonds are summarized in Table 1.
Figure 3 Dissociative NH$_3$ adsors on Mn-doped anatase TiO$_2$ (001) slab model.

a) Original structure b) Optimized geometry structure

<table>
<thead>
<tr>
<th>Molecule</th>
<th>Bond length(Å)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N-Mn</td>
</tr>
<tr>
<td>NH$_3$</td>
<td>2.059</td>
</tr>
<tr>
<td>NH$_2$-H</td>
<td>1.920</td>
</tr>
</tbody>
</table>

From the periodic DFT calculations, it can be found that dissociative ammonia adsorption on Mn-doped anatase TiO$_2$ (001) surface is more energetically favorable than that of molecular ammonia (-46.1 kcal/mol vs. -34.8 kcal/mol), which is in contrast to the results of the previous study [17].

3.1.1. H$_2$O adsorption on Mn-doped anatase (001) surface

The poisoning effect of water vapor on Mn/TiO$_2$ catalyst is investigated in the following section. As the NH$_3$ adsorption on Mn-doped anatase (001) surface, the Mn atom and surface oxygen atom are used as the active sites for SCR reaction on Mn/TiO$_2$ catalyst, as shown in Figure 4 and Figure 5. Figure 4 depicts the original and optimized geometry structure of H$_2$O molecular adsorption on Mn-doped anatase TiO$_2$ (001) surface. It shows that one of the surface oxygen atoms is severely moved and the water molecular is also seriously changed. The water molecular is almost dissociative, which forms a bridge with oxygen and Mn atoms. Water molecular adsorption energy is evaluated from total energy calculations, and the value is -51.3 kcal/mol. It is much larger than the energy of water molecular adsorption on anatase TiO$_2$ (001) (-15 kcal/mol). Moreover, the adsorption energy is also larger than that of the ammonia molecular adsorption on the catalyst surface. Therefore, water has a poisoning effect on Mn/TiO$_2$ [9]. As can be seen from Figure 4 b), the distances between hydrogen and oxygen on catalyst surface and oxygen of water molecular and Mn atom are calculated to be 1.017 Å and 1.841 Å, respectively.
For the case of dissociative adsorption mechanism, it is observed that water molecular is dissociated on Mn-doped anatase TiO$_2$ (001) surface with an exothermic relative energy difference of 44.8kcal/mol. The adsorption energy is larger than the energy (-32kcal/mol) of dissociative water adsorbing on anatase TiO$_2$ (001) surface [17]. Figure 5 illustrates that the length of O$_w$-Mn$_s$ and O$_s$-H$_w$ bond. But the dissociative water does not seriously change the surface of the model. And the oxygen atom on catalyst surface and Mn atom still form a bond. The lengths of the other bonds are listed in Table 2.

From the DFT calculations, we know that water molecule is present in a dissociated state on the surface of Mn/TiO$_2$ catalyst. But different situations have different adsorption energy. It can be concluded that the water molecular adsorption on Mn-doped anatase TiO$_2$ (001) surface is more energetically favorable than that of
dissociative water (-51.3 kcal/mol vs. -44.8 kcal/mol), which is also in contrast to the results of the previous study [17].

Table 2. The lengths of adsorbates (H₂O and OH-H) atoms with each other or surface atoms of catalyst

<table>
<thead>
<tr>
<th>Molecule</th>
<th>Bond length(Å)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Oₖ-Hₑ₁</td>
</tr>
<tr>
<td>H₂O</td>
<td>1.539</td>
</tr>
<tr>
<td>OH⁻H</td>
<td>0.973</td>
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</tbody>
</table>

4. CONCLUSION

The molecular and dissociative adsorption of water and ammonia on M-doped anatase TiO₂ (001) surface represented by a Mn replacing Ti atom model are investigated by using periodic DFT calculations. DFT calculations indicate that NH₃ molecule dissociates from Mn-doped anatase TiO₂ (001) surface with an exothermic relative energy difference of 46.1 kcal/mol, and the adsorption ability of NH₃ molecule on the surface of M-doped anatase TiO₂ (001) is weaker than that of dissociative NH₃. However, on the same surface, it is found that the adsorption abilities of molecular H₂O and dissociative H₂O are stronger than that of NH₃ molecular and dissociative NH₃. The results can explain the reason for Mn/TiO₂ catalyst deactivation caused by water.

5. ACKNOWLEDGEMENT

This work was supported by the Natural Science Foundation of Shanghai (14ZR1417800) and the Scientific Problem Tackling Program of Science and Technology Commission of Shanghai Municipality (11dz2281700, 13dz1202703, 14DZ1200201, 14DZ1200202).

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THE ATTRACTIVE FEATURES OF "KTEDONOBACTERIA" IN INDONESIA AND THEIR POTENTIAL AS MICROBIAL RESOURCE

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ABSTRACT

Bacteria with a unique morphology have recently been discovered, and the class Ktedonobacteria was created for these bacteria in the phylum Chloroflexi. We have discovered many new strains belonging to the class Ktedonobacteria from geothermal areas, composts and soil, and created 1 new order, 2 new families, 3 new genera and 5 new species into the class Ktedonobacteria. All are Gram-positive and aerobic, and form branched mycelia with spores, similar to those of mycelia-forming actinomycetes. Actinomycetes are widely recognized as rich sources for a variety of bioactive secondary metabolites, and secondary metabolism is often associated with morphological developments in microorganisms. Therefore, members of the class Ktedonobacteria are recently expected as new sources, and indeed, new compounds were discovered from Thermosporothrix hazakensis in the class. Its genome contains 21 secondary metabolite-related gene clusters such as polyketides and nonribosomal peptides. Recently, a ktedonobacterial strain from soil in a waterlogged rice paddy field on the mountainside of Gunung Salak in West Java, Indonesia (600 m altitude) was isolated and we proposed it as a new genus Dictyobacter. Moreover, our analysis of the microbial communities of the forest soil of geothermal area in Cisolok in West Java revealed that the communities are dominated by Ktedonobacteria. These results indicate that diverse Ktedonobacteria inhabit Indonesia. In this summit, we will introduce the attractive features of Ktedonobacteria.

Keywords: Ktedonobacteria, Secondary metabolites, Microbial resource

1. INTRODUCTION

Many of the antibiotics discovered from microorganisms derived from actinomycetes, they have overcome various infectious diseases. However the past several decades, the discovery of novel antibiotics them has been diminishing. On other hand, multidrug-resistant bacterial infections continue to

Fig.1 Phylogenetic position of Ktedonobacteria class
expand. Therefore, researchers from all over the world are exploring for new microbial resources. Recently, a taxonomic group that can become the new microbial resource ‘Ktedonobacteria’ was discovered.

The Ktedonobacteria were first proposed by Cavaletti et al., (2007) and were later moved from an unclassified phylum to the phylum Chloroflexi (Yabe et al., 2010). The class is currently divided into three families, Ktedonobacteraceae (Cavaletti et al., 2007) and Thermosporotrichaceae (Yabe et al., 2010), in the order Ktedonobacterales, and Thermogemmatisporaceae (Yabe et al., 2011), in the order Thermogemmatisporales. The Thermosporotrichaceae contains two species: Thermosporothrix hazakensis SK20-1T, isolated from compost (Yabe et al., 2010), and Thermosporothrix narukonensis F4T, isolated from geothermal soil (Yabe et al., 2016). The Thermogemmatisporaceae contains three species: Thermogemmatispora onikobensis ONI-1T and Thermogemmatispora foliorum ONI-5T (isolated from fallen leaves deposited on geothermal soil [Yabe et al., 2011]), and Thermogemmatispora carboxidivorans (isolated from a geothermally heated biofilm [King et al., 2014]). The Ktedonobacteraceae currently consists of two species: Ktedonobacter racemifer SOSP1-21T, isolated from soil under black locust wood in Italy [Cavaletti et al., 2007]. Recently, a ktedonobacterial strain from soil in a waterlogged rice paddy field on the mountainside of Gunung Salak in West Java, Indonesia (600 m altitude) was isolated and we proposed it as a new genus and novel species Dictyobacter aurantiacus S-27T (Yabe et al., 2017).

The known Ktedonobacteria have complex morphology and differentiation. All are Gram-positive and aerobic, and, form branched mycelia with spores, like those of the mycelia-forming actinomycetes (Fig.1). Genome sizes are 13.7 Mbp in K. racemifer SOSP1-21T (Chang et al., 2011), 7.3 Mbp in T. hazakensis SK20-1T (Yabe et al., 2012), and 5.6 Mbp in T. carboxidivorans PM5T. The genomes of K. racemifer SOSP1-21T and T. hazakensis SK20-1T also contain 15 and 21, respectively, secondary metabolite-related gene clusters. These unique morphological and genomic characteristics led us to speculate that this class might constitute a valuable new microbial resource for the discovery of novel compounds. But to use a taxon as a source for screening novel compounds, it is important first to know the habitat of the organisms in question.

Recently, we found a site dominated by Ktedonobacteria in Indonesia (the geothermal area in Cisolok). In this study, we report the ktedonobacterial community there.

2. METHODS
2.1. Site description and sample collection
Soil sample was collected from forest soil of Cisolok, West Java, Indonesia (6.933242S, 106.453550E) on September 26th, 2015. Cisolok is known for its geothermal area such as spouting hot springs. Soil was collected under the bamboo tree, 20 cm under the soil surface, keep in the plastic bag and store at refrigerator until use.

2.2. DNA extraction
DNA was isolated by using a Power Soil DNA Isolation Kit (Mo Bio Laboratories, Carlsbad, CA, USA) following the manufacturer’s protocols, and eluted in 50 µL of nuclease-free water. The quality of the DNA was examined on agarose gels, and samples were quantified by using the QuantiFluor dsDNA System (Promega, Fitchburg, WI, USA). The DNA samples were stored at −20°C until further analysis.

2.3. Amplification of the 16S rRNA gene by PCR for Illumina MiSeq sequencing
We prepared the amplicon using two rounds of PCR to amplify the 16S rRNA gene sequence (V1–V3) of the domain Bacteria. The first round used the universal primers UNIV27F and UNIV538R, linked via an Illumina sequencing primer-binding site. The second round used primers containing Illumina adapter
sequences, an index sequence, and a sequencing primer-binding site. PCR was performed with normal condition.

2.3. Amplification of the 16S rRNA gene by PCR for Illumina MiSeq sequencing

Processed high-quality reads were assigned to taxa by the RDP classifier on the basis of RDP data, with a minimum confidence level of 80% using RDP online tool (http://pyro.cme.msu.edu/index.jsp). Reads that were taxonomically unclassified at the domain level were removed.

3. RESULTS AND DISCUSSION

The MiSeq data in this study is one of the 16 samples simultaneously running at the same time. Therefore, the raw data was 175,897 reads, and the high quality read assigned to domain Bacteria with over 80% confidence value was 123,215. As a result of classifying that read by RDP classifier, it was revealed that 53.6% of all reads were class *Ktedonobacteria*, which dominates overwhelmingly in this sample (Fig. 1). The class *Ktedonobacteria* included *Thermosporothrix* (17.7%), *Ktedonobacter* (5.2%) and Unclassified *Ktedonobacterales* (77.1%). *Thermosporothrix* is known as thermophiles, we have isolated many strains belonging to the genus from geothermal area and compost in Japan (Yabe et al., 2010, 2011, 2016). They can easily be isolated with gellan gum solidified medium and the growth rate is fast. Moreover, some of them in our culture collection produce novel secondary metabolites. Therefore it might be possible to acquire such useful microbial resources assigned to the genus from the area. On the other hand, *Ktedonobacter* is known as mesophiles (Cavalatti et al., 2007). They have isolated strains SOSP1-0, 1-30, 1-52 and 1-85 belonging to the genus *Ktedonobacter* (Cavalatti et al., 2007). These results suggest that various mesophilic and thermophilic ktedonobacteria including unclassified *Ktedonobacterales* inhabit Indonesia.
4. CONCLUSION

As mentioned in Introduction, Ktedonobacteria can be drug discovery microbial resources comparable to actinomycetes. This study indicated that such beneficial microbial resources exist diversely in Indonesia. In the near future, Ktedonobacteria may be exposed to a research competition of drug discovery resources by many researchers. Therefore, it is important to isolate ktedonobacterial strains as soon as possible and collect them in the country.

5. ACKNOWLEDGEMENT

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6. REFERENCES


A COMPARATIVE STUDY ON THE MECHANICAL PROPERTIES OF CLAY-MODIFIED EPOXY ADHESIVE BY USING DIFFERENT CLAY TYPES

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40450 Shah Alam, Selangor,
Malaysia

ABSTRACT

A current challenge for the material scientists nowadays is the invention of new material systems that have a low weight, low cost yet high in mechanical performance. This challenge has arisen due to the modern trend of utilizing lightweight and high performance materials, which has the potential to contribute to the advanced future applications. In this new world, polymer nanocomposites have developed to be one of the latest evolutionary steps in the polymer technology, besides showing a great deal to become the most versatile industrial advanced materials. In comparison with conventional composites, nanocomposites demonstrate significantly higher levels of mechanical performance with less content of particles. Thus, this study was carried out to investigate the effect of nano & micron size of clay particles to mechanical properties of epoxy adhesive. Three types of mechanical test were performed; tensile, impact and shear test. The result shows that the tensile strength was increase by using micron clay while shear and impact strength was increase by using nano clay. The dispersion of clay in the epoxy adhesive is very important because it will affect the mechanical properties of epoxy adhesive itself. The function of clay to enhance the properties of epoxy adhesive is more effective when the clay is well dispersed. FESEM shows that the nano clay was well dispersed in the epoxy adhesive while micron sized clay was partially intercalated.

Keywords: Nanocomposites, epoxy adhesive, mechanical properties, montmorillonite

1. INTRODUCTION

Epoxy adhesive is the most important thermosetting, and is widely used as coatings, electronic materials, adhesives, and in structural applications. However, epoxy resins are brittle, which limits its use in some advanced applications.

Highly cross-linked epoxy resins usually have been modified with liquid rubbers, inorganic particles, and thermoplastic resins as reinforcing agents. Recently, however, nano-size inorganic particles have attracted considerable attention as new toughening agents, because the resulting materials exhibit unique properties. Various nano-size inorganic particles, such as montmorillonite, nano-CaCO$_3$, nano-SiO$_2$, and nano-Al$_2$O$_3$, have been added as toughening agents to the epoxy matrix in order to improve toughness. Among those, nano-CaCO$_3$ is the cheapest commercially available, and has a low aspect ratio and a large surface area (Jin F.L et.al., 2007)
There are myriad attempts made over the past 15 years to improve the toughness of epoxy resins by using inorganic particles. However, it has caused a loss on other desirable properties and advantageous of polymer matrix. Recently, polymer contains layered-structure particles such as layer silicate montmorillonite showed a potential of mechanical and toughness improvement because of easy functionality and cost-effective fabrication (Ma J. et al., 2014 & Zaman I., et al., 2014). The high surface area and dispersion are thought to be mainly responsible for the enhanced mechanical properties and fracture toughness (Huang X et. Al., 2012 & Boukerrou et.al., 2006). According to Subramaniyan A.K. and Sun C.T. (2005), tensile elastic modulus and flexural modulus of polymers increases with exfoliated nano clay by 60% or more. Epoxy resin systems reinforced by nano clay increase 20% – 50% in tensile strength and 20% increase in compressive strength. However, resin systems with a higher modulus reduce 15% – 25% in tensile and compressive strength with addition of nano clay and it is because of variations in the manufacturing processes and materials used.

The addition of nano clay to the epoxy resins will increase the mechanical properties of the epoxy resins itself. For example, tensile properties will increase if clay content increase. Since the clay has a higher modulus than epoxy, the improved modulus can be directly attributed to the stiffening effect of clay fillers. However, in some cases, there is limited improvement that may be related to the microstructures formed the present processing conditions. Sometimes there is significantly reduced in tensile strength and failure strain. This is because possibly linked with a poor dispersion of the nano clays in the epoxy resins. Resin degassing difficult when viscosity increases due to the addition of a high content of nano clay. Thus, it will allows the entrapment of small air voids within the blend and also causes a poor dispersion of the clays, and agglomerates/tactoids in the epoxy resins formed (Qi B et.al., 2006).

2. EXPERIMENTAL

2.1 Materials & method

All composites were prepared under identical mixing conditions. Blending was performed by mechanical stirrer (Janke & Kunkel RW20) with 1000 rotation per minute. Epoxy and filler was mixed together then the hardener was added. Ratio of epoxy and hardener was 70:30 by weight. After 10 min total mixing time the sample was quickly recovered into a sample dish. Then the sample was cured under room temperature for 1 day. Composites made from nano-sized clay was identified as N1 composite and micron-sized clay as M1 composite.

Mechanical testing was conducted to investigate the optimum strength of bonding between the adherend by shear and tensile test and to investigate the optimum strength for the M1 and N1 by impact test. Three testing were conducted in this study which are tensile, shear, and impact test. Tensile and shear was conducted by using Instron universal testing machine while izod impact test was conducted by using impact tester.

FESEM was used to characterize the clay dispersion in epoxy adhesive whether the clay is exfoliate, intercalate, or agglomerates/tactoids in the epoxy adhesive.

3. RESULT & DISCUSSION

3.1 Tensile strength

The tensile strength was obtained by using Instron universal testing machine with a loading rate of 5 mm/min. Figure 4.1 shows the significant of the differences of tensile strength on the maximum load between neat epoxy adhesive, M1 and N1 composites. The mean of maximum loading and mean of
tensile stress for M1 is slightly higher than N1 composites. Nanoclay has the ability to exfoliate and
should have a very high aspect ratio if the platelets were disordered (Kinloch and Taylor, 2006).
However in this case, the silicate layers were dispersed in intercalation structure. Hence the particles in
N1 have a lower aspect ratio as the platelets may still retain their stacked-layer structure. The
intercalation of epoxy into the clay galleries reduce the aspect ratio and resulted lower toughening effect
such as tensile strength.

![Graph of tensile strength](image)

**Figure 4.1** Maximum loads for different types of epoxy adhesive on the tensile strength.

### 3.2 Shear strength

The shear strength was obtained by using Instron universal testing machine with a loading rate of 5
mm/min. The maximum load (N), maximum extension (mm), and shear stress (MPa) obtained are
tabulated in Table 4.1. Figure 4.2 shows the shear strength on the maximum load between neat epoxy
adhesive, M1 and N1 composites.

Based on figure 4.2, there are slightly differences on the shear strength of clay modified epoxy adhesive
between using micron-sized clay and nano clay. The mean of maximum load and mean of shear stress
for N1 composite is higher than M1. The result is similar with research conducted by Dodiuk H. et. Al
(2006), the incorporation of functionalized nano clays into polyurethane adhesive had a significant effect
on the shear properties. In all cases the shear strength increased with nano clay concentration (up to 5%).
Best results were obtained with the hyperbranched modified nano clay, which exhibited almost double
shear strength compared to the neat polymer.

**Table 4.1** Shear strength of M1 and N1 composites

<table>
<thead>
<tr>
<th>Sample</th>
<th>M1</th>
<th>N1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maximum Load (N)</td>
<td>Maximum Extension (mm)</td>
</tr>
<tr>
<td>Neat epoxy adhesive</td>
<td>500</td>
<td>100</td>
</tr>
<tr>
<td>Micron clay modified epoxy adhesive</td>
<td>800</td>
<td>200</td>
</tr>
<tr>
<td>Nano clay modified epoxy adhesive</td>
<td>1000</td>
<td>300</td>
</tr>
<tr>
<td></td>
<td>Max Load (N)</td>
<td>Impact Strength (Joules)</td>
</tr>
<tr>
<td>----</td>
<td>--------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>1</td>
<td>7211.55</td>
<td>1.93</td>
</tr>
<tr>
<td>2</td>
<td>5439.87</td>
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<td>8561.79</td>
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</tr>
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<td>4</td>
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<td>5</td>
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<tr>
<td>Mean</td>
<td>7101.823</td>
<td>2.438</td>
</tr>
</tbody>
</table>

**Figure 4.2** Maximum loads for different types of epoxy adhesive on the shear strength.

### 3.2 Impact strength

The izod impact strength was obtained by using impact tester with hammer weight of 0.898 kg at 3.5 m/sec. The energy used for the impact testing is 5.5 Joules (J). Table 4.2 shows the izod impact strength of neat epoxy, M1 and N1 composites. The result shows that N1 composite give the highest impact strength. This is shows that the added of nanoclay to the epoxy adhesive has increase the impact strength of epoxy adhesive and improves the capabilities of epoxy resin to absorb the energy before crack propagation.

**Table 4.2** The izod impact strength of neat epoxy, M1 and N1 composites
<table>
<thead>
<tr>
<th>Sample</th>
<th>Neat epoxy (kJ/m²)</th>
<th>M1 (kJ/m²)</th>
<th>N1 (kJ/m²)</th>
</tr>
</thead>
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<tr>
<td>1</td>
<td>1.014</td>
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<td>1.309</td>
</tr>
<tr>
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<td>1.294</td>
<td>1.901</td>
<td>2.482</td>
</tr>
<tr>
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<td>1.352</td>
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<td>5</td>
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<tr>
<td>Mean</td>
<td>1.524</td>
<td>1.899</td>
<td>2.1532</td>
</tr>
</tbody>
</table>

### 3.4 Morphological observation

Figure 4.3 (a) and (b) shows that the FESEM images of N1 & M1 sample, respectively. The fracture surfaces of the M1 showed irregular, micro-roughened topography consistent with fast crack growth. Thermosetting resins such as epoxies have key engineering limitations, including inherent brittleness and moisture uptake. The potential of nano modifications to achieve an improved toughness-stiffness balance is the motivation for much research (Auad M. L et.al., 2007). The roughness of the fracture surfaces increases due to the tilting and twisting of the crack front. These micrographs show that the roughness of the fracture surfaces due to the addition of particles. Indeed, the apparent roughness of the fracture surfaces varies significantly from one composite to another. Figure 4.4 shows the distribution of trace element which is alumina (Al) that contain in nanoclay. It’s proven that, the nanoclay was evenly distributed in epoxy resin with partly exfoliated and intercalated. Good distribution of nanoclay in epoxy matrix provides better surface interaction thus increase N1 properties.
4. CONCLUSION

Polymer/clay nanocomposites consisting of epoxy matrix with micron-sized and nano-sized clay particles were fabricated and their mechanical properties were measured. Incorporation of clay was increased the mechanical properties of epoxy in term of adhesion and strength. N1 composite shows better performance than M1 as attributed by partly exfoliation of nanoclay layers in epoxy resin.

5. ACKNOWLEDGEMENT

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6. REFERENCES


SIMULTANEOUS REMOVAL OF SO$_2$ AND NO BY USING FENTON REAGENT SOLUTION IN A LAB-SCALE BUBBLING REACTOR

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ABSTRACT

The present study attempts to remove SO$_2$ and NO simultaneously by using Fenton reagent solution in a lab-scale bubbling reactor. Experiments were performed to examine the effect of various operating parameters such as H$_2$O$_2$ concentration, NO inlet concentration, and reaction temperature on SO$_2$ and NO removal efficiency. As can be seen from the experimental results, SO$_2$ removal efficiency kept about 99% under all experimental conditions. NO removal efficiency decreased with increasing SO$_2$ inlet concentration, NO inlet concentration and reaction temperature. When O$_2$ concentration was below 5%, increasing O$_2$ concentration can promote NO removal.

Keywords: Gas-liquid reaction; Removal; Fenton reagent; SO$_2$; NO

1. INTRODUCTION

Emissions of SO$_2$ and NOx from coal-fired power plants result in serious environmental pollution (X. Gao et al., 2010, R. Guo et al., 2011.). During the past several decades, many methods had been developed to control SO$_2$ and NO emission. As for SO$_2$ control, limestone-based scrubbing process is effective and has been applied worldwide(X. Gao et al., 2009.). For the reduction of NOx from coal-fired boilers, selective catalytic reduction (SCR) process has been seen as a very effective method to achieve low NOx emissions (R. M. Heck et al., 1994.). It is well known that insoluble NO is the main component of NOx emitted from coal-fired boilers, therefore, if NO is converted into more soluble NO$_2$; it could be removed with SO$_2$ simultaneously in a wet scrubber.

Much work had been done for studying NO oxidation and scrubbing process by using aqueous solutions of many oxidants, such as NaClO$_2$ (J. Wei et al., 2009., R. Guo et al., 2013., A. Pourmohammad bagher et al., 2011.), KMnO$_4$ (H. Chu et al., 2001.), NaClO$_3$ (R. Guo et al., 2010.), H$_2$O$_2$ (J. L. Paiva et al., 2004.), et al. Besides that, advanced oxidation process can produce OH free radical with strong oxidation ability(Z. Wu et al., 2008.). Recently, advanced oxidation technology has been utilized for NO oxidation and absorption (Y. Liu et al., 2010., N. E. Khan et al., 2010., R. Guo et al., 2011.). In our previous work(R. Guo et al., 2011.), removal
of NO by using Fenton reagent solution was reported. And in this paper, simultaneous removal of SO$_2$ and NO by using Fenton reagent solution was studied and the effects of operating parameters on SO$_2$ and NO removal efficiency were investigated and discussed.

2. EXPERIMENTAL

The experimental setup is shown in Figure 1. And the reactor used in this study is a lab-scale bubbling reactor with an inner diameter of 10cm and a height of 15cm. SO$_2$ and NO were diluted to the desired concentration before entering the bubbling reactor. A mechanical agitator was used to provide continuous stirring during the experimental process. The reaction temperature was controlled at a desired value with an error of ±0.5°C by using a water bath. At the start of an experimental run, 700mL Fenton reagent (H$_2$O$_2$/FeSO$_4$) solution was prepared and fed into the reactor. During the experimental process, a continuous flue gas analyzer (NDIR 60i, Thermo Scientific Co., Ltd.) was used to analyze SO$_2$ and NOx concentration in the outlet gas stream. And the experimental conditions are listed in Table 1.

![Figure 1 Schematic of the experimental apparatus](image)


Table 1. Experimental conditions for simultaneous removal of SO$_2$ and NO by using Fenton reagent solution

<table>
<thead>
<tr>
<th>Gas flow rate (L/min)</th>
<th>SO$_2$(ppm)</th>
<th>NO(ppm)</th>
<th>O$_2$(%)</th>
<th>Reaction temperature (K)</th>
<th>pH</th>
<th>Stirring speed (rpm)</th>
<th>Solution volume (mL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>200-1000</td>
<td>200-1000</td>
<td>0-10</td>
<td>293-333</td>
<td>3.0</td>
<td>200</td>
<td>700</td>
</tr>
</tbody>
</table>
Every experimental run was kept for 10 minutes. And the average value of outlet SO$_2$ and NOx concentration during the experimental run was used to calculate the removal efficiency:

$$\eta_{SO_2} = \frac{c_{SO_2, in} - c_{SO_2, out}}{c_{SO_2, in}} \times 100\%$$

(1)

$$\eta_{NO} = \frac{c_{NO, in} - c_{NO, out}}{c_{NO, in}} \times 100\%$$

(2)

3. RESULTS AND DISCUSSION

3.1. Reaction pathway

1) Fenton reaction (G. López et al., 2004.):

Fe$^{2+}$ + H$_2$O$_2$ → Fe$^{3+}$ + OH$^-$ + ·OH

(3)

·OH + H$_2$O$_2$ → H$_2$O + ·O$_2$H

(4)

·O$_2$H + Fe$^{3+}$ → O$_2$ + Fe$^{2+}$ + ·OH

(5)

Fe$^{2+}$ + ·OH → Fe$^{3+}$ + OH$^-$

(6)

It had been found that OH is the main intermediate in Fenton reaction process (C. Walling et al., 1975.), and the reaction pathway for simultaneous removal of SO$_2$ and NO by using Fenton reagent solution can be written as (Y. Liu et al., 2010.):

1) Hydrolysis of SO$_2$ in water:

SO$_2$ + H$_2$O ↔ H$^+$ + HSO$_3^-$

(7)

HSO$_3^-$ ↔ H$^+$ + SO$_3^{2-}$

(8)

2) Oxidation removal of SO$_2$ by ·OH:

SO$_2$(aq) + ·OH → HSO$_3^-$

(9)

HSO$_3^-$ + ·OH → 2H$^+$ + SO$_4^{2-}$

(10)

HSO$_3^-$ + ·OH → SO$_3^-$ + H$_2$O

(11)

SO$_3^-$ + ·OH → SO$_4^{2-}$ + OH$^-$

(12)

SO$_3^-$ + ·OH → SO$_4^{2-}$ + H

(13)

3) Solution of NO in water:

NO(g) ↔ NO(aq)

(14)

4) Oxidation removal of NO:

NO(aq) + ·OH → H$^+$ + NO$_2^-$

(15)
The ion chromatography (IC) analysis results of the liquid sample from the bubbling reactor show that \( \text{SO}_4^{2-} \) and \( \text{NO}_3^- \) are the main reaction product.

### 3.2 Effect of \( \text{H}_2\text{O}_2 \) concentration on \( \text{SO}_2 \) and NO removal efficiency

Figure 2 shows the effect of \( \text{H}_2\text{O}_2 \) concentration on \( \text{SO}_2 \) and NO removal efficiency. It is obvious that when \( \text{H}_2\text{O}_2 \) concentration increases from 0.5mol/L to 1.5mol/L, \( \text{SO}_2 \) removal efficiency keeps about 99%. That is to say, \( \text{H}_2\text{O}_2 \) concentration has little effect on \( \text{SO}_2 \) removal efficiency. As for NO removal, its removal efficiency increases when \( \text{H}_2\text{O}_2 \) concentration increases from 0.5moL/L to 1.0 mol/L, but when \( \text{H}_2\text{O}_2 \) concentration exceeds 1.0mol/L, NO removal efficiency nearly keeps at a stable value. The similar phenomenon was also observed by Liu et al. (C. Walling et al., 1975.). As can be seen from section 3.1, solution of \( \text{SO}_2 \) and NO in water plays an important role in the absorption process. Compared with NO, the solubility of \( \text{SO}_2 \) in water is more higher. Therefore, \( \text{SO}_2 \) removal efficiency is very high. Due to the competitive absorption between \( \text{SO}_2 \) and NO, when \( \text{H}_2\text{O}_2 \) concentration is below 1mol/L, NO removal efficiency is relatively low. Within a certain range, \( \text{OH}^+ \) concentration increases with increasing \( \text{H}_2\text{O}_2 \) concentration, which is helpful to the oxidation and absorption of \( \text{SO}_2 \) and NO; but when \( \text{H}_2\text{O}_2 \) concentration exceeds a certain value, the following reaction would cause the decrease of \( \text{OH}^+ \) concentration.

\[
\text{OH}^+ + \text{OH} \rightarrow \text{H}_2\text{O}_2
\]  

(19)

Compared with OH, the oxidation abilities of \( \text{H}_2\text{O}_2 \) are much weaker than that of OH (Y. Liu et al., 2010.); moreover, excessive \( \text{H}_2\text{O}_2 \) would oxidize Fe\(^{2+}\) into Fe\(^{3+}\), which is unfavorable to OH generation. As a result, further increase of \( \text{H}_2\text{O}_2 \) would cause a decrease of NO removal efficiency.
Effect of SO\textsubscript{2} inlet concentration on SO\textsubscript{2} and NO removal efficiency

3.3 Effect of SO\textsubscript{2} inlet concentration on SO\textsubscript{2} and NO removal efficiency

Effect of SO\textsubscript{2} inlet concentration on SO\textsubscript{2} and NO removal efficiency is shown in Figure 3. As can be seen from Figure 3, SO\textsubscript{2} removal efficiency is about 99% under all experimental conditions. Liu et al. (C. Walling et al., 1975.) studied the simultaneous removal process of SO\textsubscript{2} and NO by UV/H\textsubscript{2}O\textsubscript{2}/CaO, and also reported that SO\textsubscript{2} removal efficiency kept about 100% as SO\textsubscript{2} inlet concentration increased from 0 to 2000 ppm. But NO removal efficiency decreases with increasing SO\textsubscript{2} inlet concentration, which is caused by the competitive absorption between SO\textsubscript{2} and NO, as mentioned in section 3.2. The reaction between SO\textsubscript{2} and OH would consume a certain amount of OH radicals, which has an inhibition effect on NO removal. As a result, NO removal efficiency decreases with increasing SO\textsubscript{2} inlet concentration.
3.4 Effect of NO inlet concentration on SO$_2$ and NO removal efficiency

Experiments were performed to investigate the effect of NO inlet concentration on SO$_2$ and NO removal efficiency. The results are shown in Figure 4. It is clear that NO inlet concentration has little effect on SO$_2$ removal efficiency. As NO inlet concentration increases from 200 ppm to 1000 ppm, there is an obvious decrease of NO removal efficiency. A similar phenomenon was also observed by Liu et al. when they studied the simultaneous removal process of SO$_2$ and NO by using UV/H$_2$O$_2$ advanced oxidation technique (Y. Liu et al., 2010). As pointed in section 3.1, solution in water is the first step for SO$_2$ and NO removal by using Fenton reagent solution. Due to the low solubility of NO in water, it has little effect on SO$_2$ removal process. Because the ratio of OH radical to NO decreases with increasing NO inlet concentration, NO removal efficiency decreases with increasing NO inlet concentration.

![Figure 4](image-url)  Effect of NO inlet concentration on SO$_2$ and NO removal efficiency

3.5 Effect of O$_2$ concentration on SO$_2$ and NO removal efficiency

The effect of O$_2$ concentration on SO$_2$ and NO removal efficiency is illustrated in Figure 5. It is clear that O$_2$ has a slight promotion effect on SO$_2$ removal in the concentration range of 0-5%. There is a similar effect of O$_2$ on NO removal, but the promotion effect of O$_2$ on NO removal is more obvious. When O$_2$ concentration is below 5%, the following reaction would take place:

$$\cdot\text{OH} + \text{O}_2 \rightarrow \text{O}_2\text{H} + \cdot\text{O}$$  \hspace{1cm} (20)

O$_2$H and O are all radicals with high oxidation ability, therefore, the presence of O$_2$ in simulated flue gas can enhance the concentration of oxidants in the absorption solution, which is favourable to SO$_2$ and NO removal. But when O$_2$ concentration exceeds 5%, a great amount of OH radicals would be consumed through reaction (20), and the oxidation abilities of \cdot\text{O}_2\text{H} and Oare much weaker than that of OH, therefore, the promotion effect of O$_2$ on SO$_2$ and NO removal is not obvious.
Figure 5 Effect of O$_2$ inlet concentration on SO$_2$ and NO removal efficiency

3.6 Effect of reaction temperature on SO$_2$ and NO removal efficiency
To investigate the effect of reaction temperature on SO$_2$ and NO removal efficiency, experiments were carried out at different temperature. And the results are shown in Figure 6.

As shown in Figure 6, SO$_2$ removal efficiency remains about 99% while NO removal efficiency decreases with the reaction temperature. On one hand, increasing reaction temperature can accelerate reaction rate, which is helpful to SO$_2$ and NO removal; on the other hand, solubility of SO$_2$ and NO would decrease with increasing reaction temperature. In addition, H$_2$O$_2$ would decompose into H$_2$O and O$_2$ at high temperature. They are all unfavorable to SO$_2$ and NO removal. Because the solubility of SO$_2$ is much higher than that of NO, when the reaction temperature is below 323K, it seems that the acceleration of reaction rate with increasing reaction temperature plays a more important role for SO$_2$ removal; as the reaction temperature exceeds 323K, the decrease of SO$_2$ solubility and H$_2$O$_2$ decomposition caused by temperature rise seem to have a more negative effect on SO$_2$ removal. As for NO removal, due to its low solubility in water, the decrease of solubility caused by temperature rise has a more important impact on NO removal. Thus NO removal efficiency decreases with increasing reaction temperature.
4. CONCLUSION

Simultaneous removal of SO\textsubscript{2} and NO by using Fenton reagent solution was studied in a lab-scale bubbling reactor. It was found that SO\textsubscript{2} removal efficiency was about 99\% and NO removal efficiency decreased increasing SO\textsubscript{2} inlet concentration, NO inlet concentration and reaction temperature. When O\textsubscript{2} concentration was below 5\%, increasing O\textsubscript{2} concentration can promote NO removal.

5. ACKNOWLEDGEMENT

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6. REFERENCES

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THERMAL AND MECHANICAL PROPERTIES OF ALKALINE TREATED OIL PALM EMPTY FRUIT BUNCH/POLYPROPYLENE (OPEFB/EFB) COMPOSITES

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ABSTRACT

Oil-palm empty fruit bunch (OPEFB) is one of the potential natural fibres that can be used as an alternative to the synthetic fibre. EFB fibre was modified with alkaline treatment and used as reinforcement for polypropylene (PP). The composites were prepared by extrusion compounding and injection moulding. The untreated EFB and alkaline treated EFB with variation of fibre loadings were moulded to dumb-bell shape (ASTM D-638) and rectangular bar impact test specimen (ASTM E-23). Thermal properties of the composites were analysed by DSC and TGA whereas, mechanical properties were studied from tensile, flexural and impact tests. From the DSC measurement, generally it can be seen that there is an insignificant changes in the melting temperature \(T_m\) and degree of crystallinity \(X_c\) values for the untreated and treated EFB composites. However, a slight increment of about 3% of \(X_c\) was recorded for the composite with fibre loading of 30%, alkaline treated compared to that of untreated EFB composites. TGA shows that the EFB-PP composites with 10% fibre loading for the untreated and treated fibres give the highest thermal stability where \(T_{50}\) and derivative peak temperature \(DT_p\) show the highest value which is 471°C and 478°C respectively. Tensile modulus of the untreated and treated fibre composites were enhanced by 67.8% and 45.5% respectively as the fibre loading increased to 30%. The same enhancement was also found in the flexural modulus for the 30% fibre loading of untreated and treated fibre composites which is 39.3% and 26.2% respectively. For the impact properties, peak load \(P\) and fracture energy \(W\) were found to increase as notch to depth \((a/D)\) ratio decreased. Furthermore, critical strain energy release rate \(G_c\) and critical stress intensity factor \(K_c\) increased as the fibre loading increased in the untreated and treated fibre composites.

Keywords: extrusion/injection moulding; mechanical properties; natural/biodegradable fibre; oil-palm fibre; thermal properties

1. INTRODUCTION

A composite is composed of two (or more) individual materials that comprises of strong load carrying material (known as reinforcement) embedded in weaker material (known as matrix). Reinforcement will improve the ability of the material to support structural load by providing strength and rigidity. The matrix, or binder (organic or inorganic) maintains the position and orientation of the reinforcement \[1, 2\]. The design goal of a composite is to achieve a combination of properties that is not displayed by any single material and also to incorporate the best characteristics of each of the component \[1\].

Advanced fibre reinforced composites used various types of glass, carbon, aramid, aluminium oxide, boron and many others as reinforcing component. However, these petroleum-
based synthetic fibres, resins and composites have caused serious ecological and environmental problems due to their non-biodegradable nature [3]. This is where natural fibres come into their own advantages. They are abundant, renewable, cheap, recyclable and biodegradable. They exhibit low density and the extent of environmental pollution caused is less compared to synthetic fibres. They are naturally designed to be incredibly tough. These advantages make natural fibres as potential replacement for glass fibres in composite materials. Mechanical properties of natural fibres are very good and may compete with glass fibre in specific strength and modulus [4].

Many types of natural fibres have been investigated including flax [5], hemp [6], jute [7], henequen [8], straw, wood [9], rice husks [10], kenaf [11-14], oil palm empty fruit bunch [15-24], sisal [25] etc. Malaysia is one of the largest producers of palm oil. EFB is one of the biomass materials, which is a by-product from the palm oil industry. The production of EFB is estimated to be around 2.8 – 3.0 million tonnes per year [16, 19]. EFB is cheap and costs-saving as it commonly is a wasted or being disposed. Awareness due to the abandon of the EFB leads to the enhancement as fibre/hybrid to polymer matrix [15-23].

Natural fibres have been used to reinforce materials for over 3,000 years. More recently, they have been employed in combination with plastics. In Germany, car manufacturers aim to make every component recyclable and biodegradable. The door panels in the Mercedes have been made from plastics reinforced with flax fibres. Canadian companies also are using flax fibres in a polypropylene matrix to create mouldable material to form the rear-shelf panel of the 2000 Chevrolet Impala. The performance advantages of plant fibres in polymer matrix composites (PMC) are their chemical properties, high specific stiffness, high specific strength and sound absorption [5].

Several types of polymers have been used as matrices for natural fibre composites. The most commonly used are thermoset polymers such as polyester [14, 26-29], epoxies and phenolics. Thermoplastics like polyethylene (PE) [25], polystyrene (PS) and polypropylene (PP) [11, 16, 20, 22, 30] have also been used. Only those thermoplastics are useable for natural fibre reinforced composites as the processing temperature does not exceed 230°C. These are, most of all, polyolefins, like PE and PP. Technical thermoplastics, like polyamides, polyesters and polycarbonates require processing temperatures of above 250°C and are therefore not useable for such composite processing without fibre degradation [2]. PP possesses several useful properties like high heat distortion temperature, transparency, flame resistance, dimensional stability and high impact strength which widen its application. As a matrix material, PP is widely used because it has some excellent characters for composite fabrication. PP is also very suitable for filling, reinforcing and blending. Moreover, perfectly isotactic PP has a melting point of 171°C, commercial isotactic PP has a melting point ranging from 160-166°C, whereas syndiotactic PP with a crystallinity of 30% has a melting point of 130°C. Therefore, PP with natural fibrous polymers is one of the most promising routes to create natural–synthetic polymer composites [11, 16, 20, 22, 30, 31] as the melting point is in the range of require processing temperatures for natural fibre.

Unlike synthetic fibres, weaknesses of natural fibres are the poor compatibility between fibre-matrix and high moisture sorption. The very high polarity of cellulose fibres conflicts with the hydrophobic character of most synthetic polymers, and the obtained composites often show poor properties [32]. The mechanical and physical properties of natural fibres vary considerably depending on the chemical and structural composition, fibre type and growth conditions. The mechanical properties of composites are influenced mainly by the adhesion between the matrix
and fibres. The adhesion behaviour can be varied by treating the fibres prior to processing. So, treatment methods such as physical and chemical modifications are developed [33]. Therefore, simple modification for natural fibre will be carried out at the early stage to improve the adhesion between the fibre surface-polymer matrices and also increase the fibre strength. Water absorption of composites will be reduce and improve their mechanical properties [4]. Chemical treatment such as alkali [18], silane [11, 34], acetylation [32], benzylation, acrylation, maleated coupling agents, isocyanates, permanganate etc. are commonly used by researchers as a pre-treatments to the natural fibres.

In this study, EFB was treated by using NaOH as immersion solution. PP/EFB composite systems will be prepared using untreated and treated EFB by compounding using a twin screw extruder and moulding using an injection moulding machine. The composites will be further characterise for thermal and mechanical properties.

2. METHODS

Polymer matrix used is a commercial TITANPRO® 6331 Polypropylene homopolymer that supplied by Lotte Chemical Titan (M) Sdn. Bhd. Oil palm empty fruit bunch fibre was supplied by local company and has been readily chopped into 6 mm fibre length and meshed to mesh 40. The fibre was pre-treated by immersed in 4% (w/v %) NaOH solutions and kept immersed for 24 hours. The fibre was washed several times with distilled water to remove the excess NaOH. This procedure was continued until the pH of the washed solution reached pH 7. After that, the fibre was dried in vacuum at 80°C for 48 hours.

2.1. Specimen preparation

2.1.1. Compounding

Untreated and treated EFB were readily dried in vacuum at 80°C for 48 hours and kept in the desiccators prior to compounding not more than 24 hours. Premixing of EFB fibre and PP matrix were prepared in zipped plastic to 500 g per-portion follows the composition of fibre loading. Compositions of Fibre loading are varying to 0%, 10%, 20% and 30% for all types of fibres. Table 1 shows the compositions of fibre loading for the EFB-PP composites. Preparation of EFB-PP composites were performed by compounding the premixed portions using twin screw extruder from Brabender, Germany, model KETSE 20/40. The extruder is equipped with two screws which have 20 mm diameter and aspect ratio of 40. The extruder is divided into six heating zones from hopper to the die. Temperature profile was set at 165°C, 170°C, 175°C, 180°C, 185°C and 185°C. The screw speed was set at 80 rpm while, the die temperature was measured between 190 – 194°C. Volatile compounds that released along the compounding process were evacuated by vacuum venting. The compositions of EFB-PP were extruded out through a circular die of 3 mm in diameter to form a long strand of composite. The cooled stands were introduced to a palletiser be to cut into a length of about 6 mm and then stored in zipped plastic in desiccators.

<table>
<thead>
<tr>
<th>Composite</th>
<th>Fibre weight fraction, Wf (%)</th>
<th>Matrix weight fraction,</th>
</tr>
</thead>
</table>

Table 1 Composition of EFB fibre and PP matrix in composites
<table>
<thead>
<tr>
<th></th>
<th>Untreated</th>
<th>Alkaline</th>
<th>$W_m$ (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PP</td>
<td>-</td>
<td>-</td>
<td>100</td>
</tr>
<tr>
<td>PP/UEFB 10</td>
<td>10</td>
<td>-</td>
<td>90</td>
</tr>
<tr>
<td>PP/UEFB 20</td>
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<td>-</td>
<td>80</td>
</tr>
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<td>PP/UEFB 30</td>
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<td>-</td>
<td>70</td>
</tr>
<tr>
<td>PP/AEFB 10</td>
<td>-</td>
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</tr>
<tr>
<td>PP/AEFB 30</td>
<td>-</td>
<td>30</td>
<td>70</td>
</tr>
</tbody>
</table>

### 2.1.1. Moulding
Two types of moulds that commonly used are the dumbbell and rectangular bar shaped which follows standard ASTM D638 and ASTM E23 respectively. The composites were mould using BOY ® 55M (Germany) injection moulding machine with 55 tonne clamping force. Temperature processing profile from zone 1 to 4 which is along the barrel from hopper to the nozzle was maintained at 180°C. The screw speed was set 20 – 30 rpm with injection pressure of 100 – 120 bar. The holding pressure and holding time were set at 80 bar and 15 s respectively. On the other hand, the mould temperature was set at 25°C with cooling time of 20 s.

### 2.2. Thermal analysis
#### 2.2.1. Thermogravimetric analysis (TGA)
10 – 15 mg of the samples were placed into a ceramic crucible readily to be tested using Perkin-Elmer TGA 6 (USA). The analysis were performed under nitrogen atmosphere with nitrogen flow rate of 20 ml/min. Temperature program was set in range of 50 – 900°C and the scan rate of 10°C/min. Pyris software was used to analyses the percentage of weight change over temperature in order to investigate the thermal decomposition behavior of the composites.

#### 2.2.2. Differential scanning calorimetry (DSC)
5 – 10 mg of the sample was crimped in an aluminum pan then, analysed using Perkin-Elmer Hyper Diamond DSC (USA). The sample was subjected to heating, cooling and second heating cycles from -50°C to 190°C with scan rate of 10°C/min. The analysis were performed under nitrogen atmosphere with nitrogen flow rate of 20 ml/min. Thermogram of composites were analysed using Pyris software to determine the melting point ($T_m$), crystallization temperature ($T_c$), enthalpy heat and some other parameters.

### 2.3. Mechanical testing
#### 2.3.1. Tensile test
Universal testing machine (UTM) model Instron 5569 (USA) was used to carry out tensile test for the composites. The UTM was equipped with a load cell of 50 kN. The tensile test was performed following ASTM D638 Standard at room temperature with crosshead speed was set at 5 mm/min. A dumbbell shaped composite was gripped to the jaws of the clamp and the gauge length was set at 50 mm. From the stress-strain curve of the testing, tensile strength, tensile modulus and tensile strain were determined. The tensile modulus was calculated at 0.5% strain. The averages of at least five reproducible results will be considered for the report.
2.3.1. Flexural test

Flexural test was achieved by following ASTM D790 standard using UTM model Instron 5569 (USA). The UTM was equipped with a three point bending accessories where the span distance was fixed at 50 mm. The crosshead speed was calculated and set at 1.29 mm/min with maximum deflections of 30 mm. The calculation for the crosshead speed of the flexural test (R) is following this equation:

\[ R = \frac{ZL^2}{6d} \]

Where; \( L \) is the span distance, \( d \) is depth (equal to the thickness of the specimens, as it is mounted in the flat position) and \( Z \) is the straining rate of the outer fibre (equal to 0.01). Ten dumbbell shaped samples were tested and the values of at least five best results were considered for the average of flexural strength, flexural modulus and flexural strain.

2.3.3. Impact test

Instron Dynatup 9210 (USA) was used for impact testing under charpy mode. The instrument was equipped with falling weight impact tester with a V-shaped impactor tup. Test method for impact is following ASTM E23 standard. The testing was performed at room temperature using impactor weight (m) of 6.448 kg, at height (h) of 35mm, impact velocity (v) of 0.7966 ms\(^{-1}\) and impact energy of 1.6012 J.

Generally, dimension of the impact-bar specimens are 60 mm × 12 mm × 6 mm (Length × depth × width). The bars were notched at the centre of one edge to produce single edge notch (SEN) specimens. A Ray-ran notch cutting machine was used to make a 45° of notch angle and the notch-to-depth ratios (a/D) was measured and varied to 0.1, 0.2, 0.3 and 0.4. Ten specimens were notched for each a/D ratios and the same condition were prepared for all composites samples. The average of at least 8 reproducible results will be considered for the report. The absorbed energy that obtained from the impact tests shall be taken as the difference between the energy in the striking member at the instant of impact with the specimen and the energy remaining after breaking the specimen.

3. RESULTS AND DISCUSSION

3.1. Thermal properties

3.1.1. TGA

Thermal stability of the composites was studied by thermogravimetric analysis technique. The analysis was conducted under nitrogen gas (inert gas) in order to undergo a non-oxidative degradation. Table 2 shows TGA data of the composites where \( T_{\text{onset}} \), \( T_5\% \), \( T_{10}\% \), \( T_{50}\% \) and \( DT_p \) were extracted from TGA curve (Figure1). \( T_{\text{onset}} \) is well defined as a point where the material starts disintegrating and it is one of the measures of thermal stability. \( DT_p \) represents the peak at the highest rate of decomposition. Whereas, \( T_5\% \), \( T_{10}\% \), \( T_{50}\% \) are the temperature where 5%, 10% and 50% of degradation occurs respectively.
Figure 1: TGA thermogram of composites

Table 2: TGA data of composites

<table>
<thead>
<tr>
<th>Sample</th>
<th>Temperature (°C)</th>
<th></th>
<th></th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>$T_{\text{onset}}$</td>
<td>$T_{5%}$</td>
<td>$T_{10%}$</td>
<td>$T_{50%}$</td>
<td>$DT_p$</td>
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<td>UEFB fibre</td>
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<td>302</td>
<td>329</td>
<td>422</td>
<td>439</td>
</tr>
<tr>
<td>PP/UEFB 30</td>
<td>298</td>
<td>290</td>
<td>319</td>
<td>416</td>
<td>434</td>
</tr>
<tr>
<td>PP/AEFB 10</td>
<td>313</td>
<td>336</td>
<td>377</td>
<td>471</td>
<td>479</td>
</tr>
<tr>
<td>PP/AEFB 20</td>
<td>316</td>
<td>317</td>
<td>340</td>
<td>415</td>
<td>432</td>
</tr>
<tr>
<td>PP/AEFB 30</td>
<td>314</td>
<td>306</td>
<td>329</td>
<td>409</td>
<td>423</td>
</tr>
</tbody>
</table>

Figure 1 shows typical thermogram for degradation of PP and PP/EFB composites. The thermogram clearly demonstrates that the degradation PP/EFB occurred in two steps meanwhile, the degradation PP occurred in single step. It is believed that, the first step of the degradation in PP/EFB composites is due to the degradation of the EFB fibre and then continued with the degradation of fibre-matrix of the composites. Generally, PP shows higher thermal stability compared to the composites that loaded with the untreated and alkaline treated EFB fibres. TGA data (Table 2) have verified that the degradation temperatures ($T_{\text{onset}}, T_{5\%}, T_{10\%}, T_{50\%}$ and $DT_p$) of the PP are higher compared to the PP/EFB composites. It is believed that the degradation temperatures of the EFB/PP composites are lower because of the introduction of EFB fibre that
has lower degradation temperature as mentioned before. However, it should be noted from Table 2 where, degradation of PP/EFB composites started at higher temperature compared to Untreated and alkaline treated fibres. This suggested that, PP-matrix is acting as a heat barrier to the EFB fibres.

PP/AEFB composites show a slight increment in the thermal properties as the increment in all the parameters values ($T_{\text{onset}}$, $T_{5\%}$, $T_{10\%}$, $T_{50\%}$ and $DT_p$) compared to the PP/UEFB. The increment is believed due to the increasing in thermal stability of the EFB fibres after treated with NaOH solution. In the meantime, PP/AEFB 10 has shown higher values of $T_{50\%}$ and $DT_p$ compared to the pure PP where; $T_{50\%}$ and $DT_p$ of PP/AEFB 10 are 471°C and 479°C meanwhile, $T_{50\%}$ and $DT_p$ of PP are 440°C and 447°C respectively.

3.1.2. DSC

Figure 2 shows DSC thermogram for typical composites samples. Melting point ($T_m$), crystallization temperature ($T_c$), enthalpy heat of melting ($\Delta H_m$) and enthalpy heat of crystalline ($\Delta H_c$) can be extracted from the thermogram. Degree of crystallinity ($X_c$) was calculated using equation:

$$X_c (\%) = \frac{\Delta H_m}{\Delta H^{*}_{m}} \times 100$$

Where; $\Delta H^{*}_m$ is enthalpy heat fusion of an “ideally” fully crystalline PP, which is 209 J/g. The value of $X_c$ was normalized according to the actual PP content in the composites.

Table 3 shows DSC data of the composites which included $T_m$, $T_c$, $\Delta H_m$, $\Delta H_c$ and $X_c$. The $T_m$ and $T_c$ of pure PP are 168.5°C and 128.0°C respectively. For the PP/EFB composites, these temperatures were found to remain the same as there is no significant changing occurs regardless the untreated and alkaline treated fibre and fibre loading contained. The $X_c$ values of pure PP was found to reduce slightly after the introduction of UEFP and AEFB fibres (in the composite). Introducing of fibres will interrupt the linear crystallizable sequence of the PP chains consequently, lower the degree of crystallinity. The $X_c$ values also illustrates that there is a large amount of the flexible amorphous content which is more than 60% in the PP and PP/EFB composites.
Table 3: DSC data of composites

<table>
<thead>
<tr>
<th>Sample</th>
<th>$T_m$ (°C)</th>
<th>$T_c$ (°C)</th>
<th>$\Delta H_m$ (J/g)</th>
<th>$\Delta H_c$ (J/g)</th>
<th>$X_c$ (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PP</td>
<td>168.5</td>
<td>128.0</td>
<td>80.9</td>
<td>-85.0</td>
<td>38.7</td>
</tr>
<tr>
<td>PP/UEFB 10</td>
<td>168.7</td>
<td>126.9</td>
<td>67.2</td>
<td>-72.4</td>
<td>35.7</td>
</tr>
<tr>
<td>PP/UEFB 20</td>
<td>168.6</td>
<td>127.0</td>
<td>60.8</td>
<td>-65.1</td>
<td>36.4</td>
</tr>
<tr>
<td>PP/UEFB 30</td>
<td>168.8</td>
<td>126.7</td>
<td>50.0</td>
<td>-53.6</td>
<td>34.2</td>
</tr>
<tr>
<td>PP/AEFB 10</td>
<td>169.4</td>
<td>126.8</td>
<td>68.5</td>
<td>-73.9</td>
<td>36.4</td>
</tr>
<tr>
<td>PP/AEFB 20</td>
<td>168.9</td>
<td>126.9</td>
<td>57.5</td>
<td>-61.6</td>
<td>34.4</td>
</tr>
<tr>
<td>PP/AEFB 30</td>
<td>169.1</td>
<td>127.3</td>
<td>54.6</td>
<td>-56.3</td>
<td>37.3</td>
</tr>
</tbody>
</table>

3.2. Mechanical properties

3.2.1. Tensile properties

Tensile strength of a material is defined as the maximum stress that the material can sustain under uniaxial tensile loading. Generally, tensile strength relies on the effectiveness of the stress transfer between matrix and fibres. Diameter of fibres, fibre-matrix interfacial adhesion strength and fibre loading are the factors that significantly affect the tensile strength. Tensile modulus is a measure of the resistance of a material to deformation when external forces are applied in tension. Tensile modulus is measured at relatively low deformation, in the initial slope of the stress-strain curve (at 0.5% tensile strain) and is also referred to as Young’s modulus. Tensile strain of composites is the strain corresponding to the yield point. It is routinely quoted in terms of percent strain relative to the original sample length. Table 4 presents the tensile properties of the composites.

Table 4: Tensile properties of EFB-PP composites

<table>
<thead>
<tr>
<th>Composite</th>
<th>Tensile strength (MPa)</th>
<th>Tensile modulus (GPa)</th>
<th>Tensile strain (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PP</td>
<td>30.72</td>
<td>1.21</td>
<td>8.70</td>
</tr>
<tr>
<td>PP/UEFB 10</td>
<td>29.67</td>
<td>1.57</td>
<td>6.57</td>
</tr>
<tr>
<td>PP/UEFB 20</td>
<td>27.20</td>
<td>1.71</td>
<td>5.33</td>
</tr>
<tr>
<td>PP/UEFB 30</td>
<td>25.01</td>
<td>2.03</td>
<td>4.17</td>
</tr>
<tr>
<td>PP/AEFB 10</td>
<td>29.05</td>
<td>1.49</td>
<td>7.09</td>
</tr>
<tr>
<td>PP/AEFB 20</td>
<td>25.79</td>
<td>1.61</td>
<td>6.04</td>
</tr>
<tr>
<td>PP/AEFB 30</td>
<td>23.48</td>
<td>1.76</td>
<td>5.04</td>
</tr>
</tbody>
</table>
Figure 3: Tensile properties of PP/EFB composites: (a) Tensile modulus (b) Tensile strength and (c) Tensile strain

Tensile modulus, tensile strength and tensile strain of PP/UEFB and PP/AEFB composites were shown in Figure 3. Tensile strength was found to reduce as the fibre loading increased. This observation is mainly because of the weak interfacial adhesion and low compatibility between the polar EFB-fibre and the nonpolar PP-matrix. The increment of fibre loading also leads to the wetting effect where the fibres were not fully cemented by matrix. Tensile modulus was increased as the fibre loading increased. As tensile modulus measured at 0.5% tensile strain, there is insufficient dilation to cause a separation of the interface, implying that the adhesion strength insignificantly affect the elastic modulus of the composites. This observation can be related to increase rigidity of the matrix with the incorporation of filler as a result of restrained chain mobility, leading to drastic reduction of strain at failure.

3.2.2. Flexural properties

Flexural properties of composites depict its resistance to bending. Flexural stress-strain characteristics are derived by monitoring the force required to flex a material and the displacement undergoes as a result of the applied force at constant deformation rate. A maximum tensile force on one side consequently translating to a compressive force on the other side of sample. Therefore, the stress-strain that calculated is the maximum outer fibre stress-strain up to a maximum fibre strain of 5%. Even though in principle the same parameters are measured as in tensile test, it is the outer layer of the material rather than the bulk that is referred to in flexural test. Table 5 presents the flexural properties of the composites.
Table 5: Flexural properties of EFB-PP composites

<table>
<thead>
<tr>
<th>Composite</th>
<th>Flexural strength (MPa)</th>
<th>Flexural modulus (GPa)</th>
<th>Flexural displacement (mm/mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PP</td>
<td>45.60</td>
<td>1.22</td>
<td>0.072</td>
</tr>
<tr>
<td>PP/UEFB 10</td>
<td>45.61</td>
<td>1.29</td>
<td>0.067</td>
</tr>
<tr>
<td>PP/UEFB 20</td>
<td>45.09</td>
<td>1.49</td>
<td>0.058</td>
</tr>
<tr>
<td>PP/UEFB 30</td>
<td>44.73</td>
<td>1.70</td>
<td>0.052</td>
</tr>
<tr>
<td>PP/AEFB 10</td>
<td>48.07</td>
<td>1.25</td>
<td>0.071</td>
</tr>
<tr>
<td>PP/AEFB 20</td>
<td>47.10</td>
<td>1.41</td>
<td>0.064</td>
</tr>
<tr>
<td>PP/AEFB 30</td>
<td>46.80</td>
<td>1.54</td>
<td>0.058</td>
</tr>
</tbody>
</table>

Figure 4: Flexural properties of PP/EFB composites: (a) Flexural modulus (b) Flexural strength and (c) Flexural displacement

Figure 4 shows the histogram of flexural strength, flexural modulus and flexural displacement of PP/UEFB and PP/AEFB composites at different fibre loading respectively. Flexural strength and flexural modulus are increasing as the fibre loading increased. This observation is expected and can be explained by the contribution of the EFB-fibre as a brittle and tough material. In flexural testing, the maximum stress in stress-deflection curves occur not at maximum deflection. Within that region, the effect of even poor interfacial adhesion may not fully affect the flexural properties. This explained the increment of flexural strength in compared with tensile strength as the maximum stress in tensile occurs when the specimens break.
Flexural displacement was appeared to decrease as the fibre loading increased. Decrease in displacement at yield has been attributed to the fact that natural fibre has less strain at break than the matrix. Therefore, addition of brittle natural fibre renders the matrix more rigid by decreasing the flexibility of the polymer chain leading to reduced flexural displacement.

3.2.3. Impact properties
Charpy impact testing was used to study impact properties and the fracture behavior of the composites. Impact properties are amongst the most important material behavior that needs to be known before deciding on an application for a specific purpose. Generally, the resistance to crack propagation or fracture toughness of EFB-PP composites is characterized by considering the peak load ($P$), fracture energy ($W$), Critical strain energy release rate ($G_c$) and critical stress intensity factor ($K_c$) using single edge notched (SEN) specimens in a three point bending (3-PB) set-up according to ASTM E23 standard. $G_c$ and $K_c$ can be taken as a measure of the interfacial strength. Linear elastic fracture mechanics (LEFM) methodologies have been used to characterize the toughness of composites and plastics in terms of $G_c$ or $K_c$ of polymeric materials. Impact properties for the composites were presented in Table 6.
Table 6: Impact properties data of EFB-PP composites

<table>
<thead>
<tr>
<th>Sample</th>
<th>Peak load, $P$ (N)</th>
<th>Fracture energy, $W$ (mJ)</th>
<th>Critical strain energy release rate, $G_c$ (kJm$^{-2}$)</th>
<th>Critical stress intensity factor, $K_c$ (MPa.m$^{0.5}$)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$a/D$ 0.1 0.2 0.3 0.4</td>
<td>$a/D$ 0.1 0.2 0.3 0.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PP</td>
<td>331.8 238.4 180.4 139.6</td>
<td>116.01 65.09 48.84 36.42</td>
<td>1.94</td>
<td>1.71</td>
</tr>
<tr>
<td>UEFB-PP 10</td>
<td>350.4 237.0 178.3 152.0</td>
<td>116.47 65.66 47.04 40.80</td>
<td>1.98</td>
<td>1.66</td>
</tr>
<tr>
<td>UEFB-PP 20</td>
<td>354.0 231.1 186.2 150.0</td>
<td>127.59 79.28 63.69 49.75</td>
<td>2.31</td>
<td>1.79</td>
</tr>
<tr>
<td>UEFB-PP 30</td>
<td>361.1 256.0 203.6 152.7</td>
<td>121.77 97.69 84.04 70.91</td>
<td>2.57</td>
<td>1.87</td>
</tr>
<tr>
<td>4-24-EFB-PP 10</td>
<td>328.8 225.5 181.6 150.7</td>
<td>99.75 59.07 44.79 33.48</td>
<td>1.68</td>
<td>1.67</td>
</tr>
<tr>
<td>4-24-EFB-PP 20</td>
<td>325.3 233.0 188.8 154.8</td>
<td>96.18 70.11 57.72 49.36</td>
<td>1.84</td>
<td>1.78</td>
</tr>
<tr>
<td>4-24-EFB-PP 30</td>
<td>331.2 265.3 214.7 170.0</td>
<td>116.09 99.76 86.25 71.07</td>
<td>2.45</td>
<td>1.82</td>
</tr>
</tbody>
</table>
Histograms of $P$ and $W$ against fibre loading and $a/D$ are depicted in Figure 5(a) and 5(b) respectively. From the histogram, it can be observed that the $P$ and $W$ values decrease with increase in $a/D$ values for both treated and untreated EFB-PP composites at all fibre loading. This trend is due to the reduction of the fracture area with increasing notch depth. The increment of the $P$ and $W$ values also observed with respect to increasing fibre content at the same $a/D$. This is due to the contribution of the fibre that results in high strength of composites. In addition, the presence of the fibres tend to reduce resistance to crack initiation, resulting in increase in the material brittleness, while at the same time reducing crack propagation through the matrix by forcing crack lines around the fibre ends [37, 38].
Figure 5: Impact properties of PP/EFB composites: (a) Peak load (b) Fracture energy (c) Critical strain energy rate, $G_c$ and (d) Critical stress intensity factor, $K_c$

The fracture toughness or the resistance to crack propagation as measured by $G_c$ or $K_c$ is essentially a measure of the extent of plastic deformation associated with crack extension. $G_c$ is the total energy absorbed by test specimen divided by its net cross section area and is used to measure the energy necessary for crack initiation. $G_c$ is a material parameter that when properly determined does not depend on specimen geometry. $K_c$ characterizes the severity of the crack situation as affected by crack size, stress and geometry. Figure 5(c) and 5(d) present $G_c$ and $K_c$ of composites at various fibre loading respectively.

The $G_c$ and $K_c$ values of PP/UEFB and PP/AEFB composites are increasing with the increment of fibre loading. This is due to the contribution of fibre content that resulted in the high stiffness of the composites. The high value of the unreinforced PP is because of slow crack propagation as the ductile nature of the PP. As observed for $W$, the increment may have resulted from the present of EFB fibre ends within the PP matrix which tend to reduce the crack propagation. The increment in $G_c$ and $K_c$ indicates that, as EFB fibre is included in the composite, impact energy dissipation originated from fibre inclusion is more [39]. The main mechanisms suggested were the debonding between EFB fibre and PP matrix and fiber pull-out [40, 41]. The plastic deformation of the PP matrix also contributes to the impact energy absorption. The fracture energy absorption was shown to be dominated by contribution from matrix plasticity [40, 42]. The matrix plastic deformation occurs either through homogeneous deformation of the matrix or from localized deformation around fiber ends.
4. CONCLUSION

Introduction of the UEFB and AEFB fibres in PP matrix resulted in a slight reduction in the thermal stability of PP/UEFB and PP/AEFB composites. However, PP/AEFB shows an increment in thermal stability compared to PP/UEFB. Melting temperature and crystalline temperature of pure PP remain the same as UEFB and AEFB were loaded into the composites but, the degree of crystallinity of pure PP was slightly reduced.

Generally, tensile modulus and flexural modulus of the composites are increasing as the fibre loading increased. Tensile modulus and flexural modulus of PP/UEFB are higher compared to PP/AEFB. Tensile strength and tensile strain were found to reduce with the fibre loading. The same patterns were observed in the flexural strength and flexural displacement. Despite of that, the flexural strength of PP/AEFB composite is higher than PP/UEFB composite. For the impact properties, the peak loads (P) and fracture energy (W) are increasing with the fibre loading but reducing as the a/D ratios were increased. Meanwhile, $G_c$ and $K_c$ of the PP/EFB composites were increased with the increment of the fibre loading. However, the $G_c$ and $K_c$ values of the PP/UEFB composite is higher compred to the PP/AEFB composite.

5. ACKNOWLEDGEMENT

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6. REFERENCES


SOCIAL SCIENCE
A COMPARATIVE ANALYSIS OF THE CRITICAL PEDAGOGY OF MICHAEL APPLE AND HENRY GIROUX

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ABSTRACT

This research exposed the similarities and differences of the critical pedagogies of Michael Apple and Giroux. It begins by defining what critical pedagogy is and how it started. After such, the research showed the critical pedagogies of Apple and Giroux as philosophies of education are showed by exposing their view of contemporary society, their aims of education, their proposed method of teaching, their curriculum, and the role of the teachers. Then there is a factor-by-factor comparison of the critical pedagogies of Apple and Giroux which consequently exposed the differences and similarities in their pedagogies. This research drew upon primary and secondary sources which are mostly comprised of books and used descriptive and comparative analysis to expose their philosophies of education and compare them in a detailed manner. The research found out that there are differences and similarities on the pedagogies of Apple and Giroux and from that, we concluded that educational outcomes depend on who and how it is handled and delivered to the people we ought to give it to and from that thought is where critical pedagogy enters in an era where education is seen to be of a treasure.

Keywords: Michael Apple, Henry Giroux, Critical Pedagogy, Philosophy of Education

Introduction

There are many ideologies surrounding education which come from psychological theories (e.g. behaviorism) and philosophical perspectives (e.g. progressivism, essentialism). In 1970, Brazilian educator Paulo Freire published his book “Pedagogy of the Oppressed” which gave birth to a new philosophy of education known today as critical pedagogy. This has influenced many educators specifically Henry Giroux and Michael Apple to which they developed their own critical pedagogy.

Giroux (2014) tells us that critical pedagogy must be a political and moral project rather than a technique since it “illuminates the relationships among knowledge, authority, and power.” Giroux (1983) also tells us that critical pedagogy challenges the unequal nature of education that comes from the way we teach that maintains inequalities in terms of cultural, social, and economic attributes. Thus, critical pedagogy is an eye-opener for its students to know their different consciousness.
(e.g. cultural consciousness, social consciousness, etc.) and the different relationships stemming from it.

Apple et al. (2008) defines critical pedagogy as a tool to see “education along with power, inequality, race, willingness, etc.” As a brainchild of critical theory, Apple et al. (2008) also criticizes the legitimacy of knowledge being taught in schools: its source, the reason for legitimizing, and the legitimizing authority. Apple et al. (2008) also debunks the objectivity of education; that education should be connected “to the race of whom you teach, to their willingness, to the culture they have and to their stature.” This means that education should be enabling students to understand where they come from and how education should be connected to help them be educated from it.

Apple and Giroux, in Mufti and Peace (2012), say that schools and society give a higher status to certain types of behavior and more crucially knowledge. Wherein with the roots of oppression Apple and Giroux states the following respectively, in Apple, Au and Gandin (2008) Critical Pedagogy as rooted in politics. Here, politics is being the cesspool of power, culture, social and inequality. This means that different ideologies must be taught a curriculum that is according to their ideologies.

The two different philosophers argued in ways they see what and how critical pedagogy is and works. These two different perspectives, however, still has more to bring out for educators and this study has identified their similarities and differences in a comparative analysis which can be used in researches concerning philosophy of education, education per se, philosophers Michael Apple and Henry Giroux, or critical pedagogy itself.

History of Critical Pedagogy

Critical Pedagogy is believed to have started with the work of Paulo Freire, a Brazilian educator who formerly led the Ministry of Education in Brazil, entitled “Pedagogy of the Oppressed.” It was during his political exile in Brazil where he had observed the situation that resulted to his work and these observations have been reinforced by his former educational activities also in Brazil. He had encountered in both training courses and in actual experimentation that there are some people who fear freedom by resisting to what he calls “conscientizacao” which is about the education that exposes the social, political, and economic realities where the learner lives and works to the extent that the learner also learns to be active to counter the oppressive elements of those realities. The system of education that Freire has seen on the side of the oppressors is the “banking concept of education”. This type of education, for Freire, is oppressive since it disrupts the creative power of the students that serves the interest of the oppressors since they do not care about the revelation of the world or about its transformation.

“Conscientizacao” leads people to the search for self-affirmation and thus avoid fanaticism. The concept of “conscientizacao” is due to the fact that the major Freirean educational goal is about raising consciousness and “conscientizacao” is
about constructing critical awareness on the reality of social, political, and
economic conditions and contradictions where people live and work.

**Methodology**

The main objective of the study is to compare the critical pedagogies of Michael Apple and Henry Giroux and find the similarities and their differences by pursuing these questions;

What is Critical Pedagogy?
What is Apple’s Critical Pedagogy?
What is Giroux’s Critical Pedagogy?
What are the diverging views in Apple and Giroux’s Critical Pedagogy?
What are the common grounds in Apple and Giroux’s Critical Pedagogy?

The conceptual framework used in this study is what we call the “Comparative Analysis of Education” paradigm (Figure 1).

![Fig. 1. Comparative Analysis of Education](image)

First, the researchers studied both the Critical Pedagogy of Giroux and Apple and afterwards presented their similarities and their differences. After such, the researchers summarized the findings as a synthesis.

This research used a qualitative approach and used library research method for gathering data. For methods of analyzing data, the researchers used descriptive analysis and comparative analysis. According to the University of Virginia’s College at Wise (UVAWISE) work on Types of Analysis ("Types of Analysis," n.d.), a descriptive analysis offers a detailed description using objective or subjective language to describe some object and in the process, give the reader some dominant impression of the thing being described while a comparative analysis explains how something is like or unlike something else. The thesis indicated whether the essay will focus on similarities or differences. In our case, however, we focused on both the similarities and differences.
APPLE’S CRITICAL PEDAGOGY

View on Contemporary Education

What Apple sees education must be is as a way to build their “identitiness”. “Identitiness” is what the learner’s experience or have experienced where they can identify themselves. Rooting out of Paulo Freire’s critical pedagogy, when learners build up their own identities through education, they will not be oppressed by those who have powerful identities or influential identities thus producing a better society, however education is held by the government, or people with powerful and influential identities, the identities of the learners becomes oppressed and therefore undeveloped and tarnished by other identities.

Apple sees that because education is tarnished by the government, education has now entered a business-oriented ideology where learners strive in education to find jobs and be powerful and influential. A factory producing drones that strive to implement their own ideologies on the new generation of oppressed people.

For Apple, education is at the core of an entire range of political and cultural conflicts and these cannot be resolved by majority belief but with the identity of the people willing to mobilize their belief, all for the betterment and change of society, and not just following the ideology imposed by the state. Although this is the case, education must stand alone as an institution; it must operate outside politics and government and must have its own area outside all these cultural and political problems where it would remain unbiased from other ideologies.

Apple wants people to enrich their own identities and ideologies and not adopt another’s identities and ideologies that through self-identification of the learner they learn and be able to critically tackle society’s issues for their own interest and not others, through the learners’ self-identification they can build an unbiased society that can answer society problems efficiently and not only for their gains but for the gains of society as a whole.

Methods of Teaching

The neoliberal approach, in economy means the privatization of businesses from the governments hold granting them rein of the free-market making them much powerful and influential, in educational means, Apple only applies the concept of neoliberalism’s privatization to the educational institution.

Apple believes in the mobilization or the action of teachers and students through active activism against the governments’ hold on the educational institution. Activism does not only mean to confront the government in a public rally but also to oppose government imposed curriculum practices through extracurricular. Under this method students are illuminated of the governments’ power and influence and how it can be used, or is being used in a wrongful way. Apple now sees the educational institution as something operating outside the scales of politics and the government, an educational neoliberal method of teaching, wherein the educational
institution can teach the students freely what they need to learn and not what is imposed upon them by the powerful and influential. Education under this method of teaching focuses more on the students’ development with the teachers being careful enough to not tarnish their students’ identities with their own.

**Curriculum**

The curriculum connects the educational institution to the problems of the community and to the issues of society. Because of this it can also serve as an excellent exemplar for an analysis of the linkages schools have had with other institutions. Apple adds that the curriculum in schools responds to and represents ideological and cultural resources that come from somewhere. The curriculum must be representing the identities of people and not the powerful; it must be a mirror to the identities of who it is teaching. The central feature of Apple’s view of curriculum construction was that the curriculum needed to be differentiated to prepare individuals of differing intelligence and ability for a variety of different but specific adult life functions. Curriculum differentiation based on ‘identitiness’ would create cultural homogeneity and thereby stability within the society.

An open discussion about the curricula with all the stakeholders – teachers, administrators, parents, community activists, and students – shall happen before the implementation for the curricula to have a gear towards “identitiness”.

**Role of the Teacher**

Apple states the teachers are the ones who guide the students into self-identification; the teachers are the ones who help the learners to be illuminated by the political dominance of those powerful and influential. Apple argues that education right now is simply factories producing test scores and docile workers. Teachers and all public workers are treated as unworthy of serious respect, but this should not be in the first place for Apple states that teachers, has a strong voice in educational policy, for they are the voice of education itself.

Apple also thinks that teachers shall be involved in the discussion of the curricula and pedagogy.

**GIROUX’S CRITICAL PEDAGOGY**

**View on Contemporary Education**

Giroux was strongly in contrast with neoliberal pedagogy by saying that the possibilities of an educational institution where critical thought, analysis, dialogue, and action are assaulted by a market-driven model of education. He claims that neoliberalism is a more intense form of market fundamentalism in the educational system with foci on memorization and standardized tests that would help students find a role in the market, where students are treated as commodity which makes them conform to the market.
On a neoliberal education, Giroux says, students are treated as customers and not seen as a resource for the betterment of the society; students are running in an “economic Darwinism” where a society is characterized by survival-of-the-fittest for if students cannot pay then they are deprived of education.

**Aims of Education**

For Giroux, the aims of education are to lay a society with a formative culture that has the capability to produce citizens that are self-reflective, knowledgeable, critical, and who does not separate morality from everyday judgments which leads to his actions being responsible for the society that will lead for an entire student population and citizen to become introduced, prepared, and legitimated of forms of social life.

Giroux’s aim of education is emancipation from oppression; “conscientizacao,” it should be teaching the realities on where they live and work – their identities – and from there they can expand their rights and fight against the inequalities they are delving in. Critical pedagogy in this sense would resist the neoliberal approach where pedagogy is only just a skill, technique, or disinterested method since this means that it is more than that; it is an instrument for social transformation. As such, Giroux tells us that critical pedagogy is a postmodern paradigm deconstructing the current society in order for them to keep the promise of democracy, justice, and hope alive.

Ethics is seen as a central concern of critical pedagogy of Giroux and these can manifest in different ethical discourses that offer students richer fund of meanings that help them relate to the diversity in the wider society.

**Methods of Teaching**

Education focuses on the interpretations of students and uses it as a mode of intervention and applies it as an energizing practice for them to think and act differently, students should never be confined only to the classes of the progressive educator but must act on themselves upon the most important problems of our times which include societal problems. Giroux tells us that educators should have discursive practices inside their classrooms while having the topics which have interrelations. Educators should let their students analyze and give meaning to those interrelated topics which would be constructed in the spirit of articulated contexts of operations of power in texts, teachers, and students as well. It is necessary for critical pedagogy to penetrate, as a method of teaching, the popular cultural spheres which include cinemas, theatres, schools, libraries, mass media, computers, internet, and new information technologies.

**Curriculum**

Giroux contends that critical pedagogy shall bear subjects that are flexible to adjust to a pedagogical site and contextually defined, allowing it to respond specifically to the conditions, formations, and problems that arise in various sites in which
education takes place”. We should include subjects catering the creation of formative culture of beliefs, practices, social relations, and also discuss power relations, what knowledge counts, being critical, being sympathetic to others especially to their problems, taking risks, acting on their sense of social responsibility, student engagement, and diverse intellectual ideas and traditions. The challenging of market fundamentalists, religious extremists, and other ideologies that harbors deep disdain for critical thought and healthy skepticism; to take the imperative to disseminate an intellectual and artistic culture. What we teach should also cater to the identity of the student and flexible to address specific needs of a specific society.

**Role of Teachers**

Giroux envisions critical pedagogy having educators that are cultural workers who occupy special political and social roles by transforming culture, educators are both scholars and practitioners which, consequently, they are bound not only to teach students but also to let students see on what ideological and political ways can curricular knowledge serve. Educators should believe that we can do both culture and economics together, educators shall also critically question their own subjective involvement in how and what they teach. Moreover, they shall be in resistance to the voices that encourage the separation of politics and pedagogy via scientific objectivity or ideological dogmatism.

An educator should make a student think outside the box of choices by making his or her student become a creator of another box of choices. Critical pedagogy does not just only ask activism from its students but also from educators who are deemed to be more likely exemplars. Educators shall be concerned ethically with the accusation of critical pedagogy of those meta-narratives who deem themselves as eternally recurring and valid universally.

**DIFFERENCES OF THE PEDAGOGIES**

**View on Contemporary Education**

Apple sees Contemporary Education as an instrument for the powerful and the influential. He sees education as something that is already tarnished by power and the influence of others. Apple sees that education should produce students with identities of their own, where they have their own perspective on things, their own say on the matter without being influenced. While Apple views contemporary education to be controlled and influenced by the government, Giroux on the other hand sees education as something being controlled by the economic neoliberal movement. Giroux sees education in contemporary society as a commodity that is sold to learners.

Giroux sees the learners as products that are being tested by educational institutions to see if their quality will be useable by society through standardized testing and such. Education has a market-driven ideology for Giroux, unlike Apple who sees
Contemporary education as something being controlled and driven by power and influence.

Aims in Education

The difference between Apple and Giroux’s aims in education is that Apple wants to separate the educational institution and the government. Apple wants the government to have nothing to do with the educational institution. Giroux on the other hand did not give any clear stand on this issue, Giroux did not state if he wants to separate the educational institution to the government for his aims in education to come to fruition or not.

Another one is that Apple tackles on a political problem that education must confront for education to be free of those who control it. Apple sees education as something that must shape the identities of its learners without those in power or influence to disrupt it. Giroux, on the other hand, tackles the ethical problems on diversity for education to have new meaning on different cultures so that it may propagate and influence a lot more.

Talking about what to achieve of critical pedagogy, Apple sees that education under critical pedagogy must be able to shape a new society so that society will progress while Giroux sees it as something that will help learners to deconstruct society so that they can tackle its problems more, thus producing a better society.

Method of Teaching

Apple applies his neoliberal approach when it comes to his teaching methods, unlike Giroux who disproves of neoliberal approach. However, it should be noted that Apple’s neoliberal approach only uses the privatization nature of the economic neoliberal approach and applies it to education making education a privatized part of society that the government cannot influence whatsoever. While Giroux on the other hand sees it as something that puts education in the market and is treated as a commodity.

Another difference between Apple and Giroux in their methods of teaching is that although both believe that education should not be confined to the four corners of the school they apply it differently. With Apple, believing that education should also teach students the injustice of the government and the oppression of the powerful while Giroux only believes that students should also learn outside the educational institution by tackling social, political and cultural issues and not be activist against the government like Apple sees it.

Another difference in their views is that Apple wants the educational institution to be bigger than the government with politics inside the area of education and not the other way around, while Giroux does not give a clear statement whether he wants education to be separated from the government or not.

Another method that Giroux wants to apply to education is the incorporation of technology to education to penetrate popular culture and use it to better educate the learners, so that the learners would be much more interested in education itself.
Apple on the other hand did not state clearly whether educators must incorporate technology in critical pedagogy.

Curriculum

One notable difference between them is that Giroux wants to challenge market fundamentalists, religious extremists, and other ideologies that harbor deep disdain for critical thought and healthy skepticism while Apple, on the other hand, does not challenge the government’s say on curriculum making; Apple wants to remove them from it.

Another difference of the two is on the subjects that should be applied to the curriculum, with Apple focusing much more on his curriculum differentiation to suggest the subjects a group of learners must take and Giroux suggesting subjects that cater a reflective and critical environment for critical or progressive educators and students, but still must be taught under context of the learners.

Role of the Teacher

Apple sees educators as guides that connect what they teach to each individual student, so that each student develops their own identities. Once students develop their own identities they must apply them outside, to society and confront society’s problems, be it social, political and/or cultural problems. Giroux sees it differently and believes that educators themselves must apply what they are teaching outside, to society, and not let the students do it on their own.

Another difference between the two is on how they see educators. Apple sees educators as the voice of education; they are the core of education wherein they develop the identities of those who will mold society, anything lower than that is not acceptable to Apple.

Giroux sees educators as social workers who transform society wherein they teach the students on what ideological and political ways curricular knowledge serves, which Apple wants to avoid since he sees the educator as someone who avoids harming the identities of the learners themselves.

SIMILARITIES OF THE PEDAGOGIES

View on Contemporary Education

Both want education to be separated from these controlling entities, the government and neoliberal approach, respectively, and let the educational institution stand on its own and do its real purposes. Also, both see education as something that must not be controlled it must be able to stand up on its own as an institution and not something promoting the ideals of another institution; they both see education as something that must be available for all in order to stop the poor and the weak from being oppressed. Moreover, both see education as the driving force for social change and betterment that if education is being controlled by these different
entities then education has no chance of changing society much more from making it better.

Aims in Education

Both see the learner’s true identities as tools to change society. The identity of a student once developed in education will be able to tackle society’s problems and be able to confront them wisely and fairly, for they have their own views on these problems and are not corrupted by power and influence to be biased in making decisions.

Giroux also sees that education must be able to teach power relations and that one with power must be able to be responsible and must learn to be accountable for their mistakes. Apple sees it in the same way, believing that those educated must be able to share their “identitiness” with others and must not oppress others. They must be the ones that should use education correctly and not use it to oppress and control.

Methods of Teaching

The main common ground of Apple and Giroux when it comes to their methods of teaching is that they both want to impart with the students a sense of identity, wherein Apple wants his learners to overthrow dominant forces and/or controlling influential, and through this show of activism the students are then able to explore their own identities by removing the shackles of other people’s ideologies and set some of their own. Giroux, on the other hand, sees that education shall be focusing on the interpretations of students and use it as a mode of intervention and apply it as an energizing practice to both think and act differently (minus the show of activism). Where we see that both want their learners to be able to critically think and set their own perspectives and ideologies of their own.

Another similarity of the two is the way they both not want to apply education or things the teachers teach them only in the four corners of the classroom, although they apply it differently, with Apple applying it purely on activism and Giroux applying it on social practices, both still see that education must not be contained within the four corners of the classroom.

Curriculum

When it comes to the curriculum both Apple and Giroux believe that it must be adaptive, with Apple using the term “curriculum differentiation” and Giroux using the term “contextually defined”. Although different terms they are applied the same way wherein Apple states that the curricular subjects must be different for each group of students where a group of Asian students will be taught history but in the context and persona of their Asian ancestors and not in any other for it will change their predetermined identity.

Giroux on the other hand states that pedagogy must always be contextually defined where if Philippine history is being taught then it must be taught only to Filipinos. Also, culture should be included in every subject since as we have read both believe
in identity of the learner and what more can establish their original identities than culture.

**Role of the Teacher**

Apple and Giroux both see the educators as someone who prepares the learners in confronting society’s political, cultural and societal problems. They prepare their learners by giving those examples of society’s problems and let the learners tackle them in their own ways. Apple and Giroux also see the teacher as someone who is subjective to their learners, for they both try to evade the objective truth the powerful and influential try to spread. They are unbiased as possible.

Another similarity is that Apple sees the educator as someone who guides the learners to active activism, the same as Giroux who see educators as exemplars but not only in activism (as seen in their differences Giroux does not completely support activism the same way as Apple does).

**Conclusion**

Education’s greatness rests on the people who handle it either by influence or power; this is what this research sends to its readers. From here, critical pedagogy has played an important role in exposing this fact to many people: the fact that education may be great but can still be used as a tool for oppression. Moreover, critical pedagogy, valuable as it may seem, can be used to raise the students’ critical thinking by analyzing social problems, thus making it a plausible philosophy of education for the development of one’s society.

Critical pedagogy is concerned with identitiness, humanization, emancipation from oppression, students’ consciousness, anti-economic Darwinism, curriculum, producing critical learners, educational relations to politics, to culture, to democracy, and to the society. Critical pedagogy is a good pedagogy to be applied in the world since it is for humanization and not via market fundamentalism unlike the humanization by dehumanization of the neoliberalist pedagogy.

The comparative nature of the study found that there are fields of comparison which are on the difference or similarities of their (Apple and Giroux) critical pedagogies as a philosophy of education. In determining such grounds, we have laid down their critical pedagogy as a philosophy of education by outlining it into 5 parts namely View on Contemporary Education, Aims of Education, Method of Teaching, Curriculum, and Role of Teacher. By outlining their philosophy of education, we have also established grounds for comparison. Due to the study’s comparative nature, we are to seek the difference and similarities on their philosophy of education.
It is found that their aims of education and critical pedagogy are different. Apple primarily contends that education should not be connected to politics while Giroux says that education should be connected to politics. On their critical pedagogy, Apple contends that curriculum-makers shall make identity as central of the curriculum whereas Giroux tells that the curriculum shall be democratized because democratization can provide opportunities for the students and the school as a whole. For their common grounds, we have found out that they have similar ideas in terms of aims of education, critical pedagogy, and aims of their respective critical pedagogy. Apple tells us that education is for identitiness while Giroux tells that education is for critical thinking. Both concepts are for the betterment of the student. Also, education is connected to politics for both philosophers. Moreover, Apple and Giroux says that education shall be connected to culture for its vitality and development. Lastly, they say that education is for the betterment and transformation of the society. For their critical pedagogy, they say that education should have activism against the societal power that is influential. Moreover, critical pedagogy illuminates certain factors that affect the learners. Lastly, critical pedagogy shall enable its students to realize the importance of critical theory in other factors that affect them and the society as well.

From this, we infer that the Critical Pedagogies of Apple and Giroux have differences and similarities, but overall have a vision for a better educational system to achieve emancipation from oppression of those who are in power or influential in terms of their culture. Critical pedagogy is for the betterment of the students, their school, and the overall human society where the educators and their students live and will work in the future.

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References


REVISITING THE CONCEPT OF RELIGIOUS FUNDAMENTALISM FOR EMBRACING THE WORLD PEACE: AN ANALYTICAL STUDY

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ABSTRACT

Religious fundamentalism has become the most serious issues in the last three decades. Fundamentalism is a strict adherence to a certain religious philosophy. It is an act of fanaticism and often in many cases cause extremism and calls for rejection from the society. Religious fundamentalism is often associated with Islam despite of the fact that such act exists in other religions as well. The emergence of numbers of Islamic radical groups strengthened that stigma. These groups so-called “Islamic” propagate their version of truth and objective of creating the world peace in their ways. They use the Qur'anic and Prophetic Tradition references falsely and misleadingly that many ignorance young Muslims were brain washed to join their forces. The researchers seek to critically analyze the concept being used by radical groups and its applied philosophy. The researchers will examine the methodology used by these groups in comprehending the related concepts. This paper will give good justification for Muslim ummah to grasp the correct understanding of Islam and not to blindly accept any misleading philosophy associated to this term.

Keywords: Fundamentalism, Extremism, Peace, Islam, Moderation.

INTRODUCTION

Fundamentalism is one problematic term which been widely used in today’s world. Originated from the Christian tradition and turned into an identity attached to Islam. The Oxford Dictionary defines fundamentalism as “going back to the sources and accepting their literal inerrancy, thus reaffirming, in a radically changed environment, traditional modes of behavior and understanding.”9 The Oxford Dictionary of Christianity adds the historical dimension: “A movement in various Protestant bodies which developed after the War of 1914-1918, especially in the United States. It rigidly upheld what it believed to be traditional orthodox Christian doctrines and especially the literal inerrancy of Scripture.10 From political aspect,

10 Ibid
fundamentalism is viewed as a radical movement from certain Islamic Parties as stereotyped and identified by the mass media. There can be little doubt of the fact that fundamentalism today is a worldwide phenomenon. It seems to be a global wave of negative reaction to modernity and Western values, brought about by a variety of factors of varying importance in the different contexts of each one of these religions: Islam, Christianity and Judaism.

Nevertheless, the term is also utilized to recognize extremist movements and acts of radicalism from other religions such as Jews, Hinduism, Buddhism and Sikhism from around the world. Due to its complexity in defining its real meaning contextually, many scholars prefers to avoid giving mere a simple term. Some prefer to provide characteristics of fundamentalism rather than defining it for the said reason.

DEFINITION AND HISTORY OF FUNDAMENTALISM

The term “fundamentalism” (Arabic equivalent: Usuliyyah) - originally a Christian Protestant term – developed in the early part of the twentieth century. It was used to refer to Christian groups that believed in the inerrancy of the scriptures as opposed to those who sought to make scriptural change to accommodate the modern world.

In the Islamic context, the term is somewhat redundant; however, some scholars have been trying to understand the connection between Islam and fundamentalism. Theoretically, the great majority of practicing Muslims are ‘fundamentalists’ since they believe that Qur’an remains unchanged from its initial revelation.

The term has been widely used lately despite the fact that the real meaning is still unclear because it’s either too general or subject to revisions. Fundamentalism implicitly can be understood as firm and rigidness. The term often used to describe certain meanings and yet cannot give boundaries to the intended purpose and even sometimes fall so far from its trees of true meaning. This was mainly caused by the relativity nature of the term and ambiguity of its deliverance.

Fundamentalism can be found easily in many forms within society from their thought and history. On the other hand, the meaning of fundamentalism is narrowed, limited to religion and culture and more linked with Islam. It’s resultedto associating the word fundamentalism for those people who directly identified with the political Islam has been affected by the Western mass media. The above assumption is closely related to the revolution in Iran which relates fundamentalism to Islam or Islamic politics.

James Barr, one of the main reference in the field of fundamentalism says, the term originated from the title of the essay entitled "Fundamentals" that appears in America around 1910-1915. The term is used to categorize the Theology Exclusive against Apocalypse, the divinity of Jesus, miracles of Mary who gave birth while still a Virgin, as well as other belief that is still believed by Christian fundamentalists until now.\footnote{Barr, James., Fundamentalism,(London : SCM Press, 1977), 1-3.} However, some say the naming is not suitable for the fundamentalists, because their opinions too narrow and less obvious. Even if this reason is less acceptable, because at least the new fundamentalism still belongs to the category of fundamental — in classical meaning, in addition to his teachings are still arriving by the fundamentalists. Historical factors in the meaning of this term are not so important to understand that term today. Some observers argue that fundamentalism was originally confined to adherents of Protestantism in the United States.\footnote{Marsden, G., Understanding Fundamentalism and Evangelicalism, (Michigan: William B. Eerdmans Publishing Company, 1991), 1.}

The term was also used for the guardians of the Gospel (evangelicals) in the Protestants and also some other sects in Christianity. As Marsden described that a fundamentalist is an evangelical who is angry about something.\footnote{Marsden, G., Fundamentalism and American Culture: The Shaping Of Twentieth Century Evangelicalism, 1890 – 1925. (New York: Oxford University Press, 1980), 244.} Many also assume that fundamentalism is a village community group, or a group of remote communities who live in the small, predominately Protestant. Then a movements of militant religious fundamentalism become movement that uses the power of politics, as a tool to combat what was perceived as the movement of liberalism, which threatens the stability of the country, family, and Church. Wild ideas of this sort began to come alive in the time of Russfelt.\footnote{Garaudy, Roger. Al-asobiyyah al Mu'asirah:AsbabuhuwaMazahiruhu. Ta'rib Khalil Ahmad Khalil (Paris, Dar Alfain, 1992) 13.}

Many opinions that says fundamentalism is a new phenomenon, but some historians of American Protestant trying not to admit that fundamentalism in America was the result of centuries of the twenties, which at that time was a debate occurred about the theory of evolution and the origin of humans. Marsden was trying to pull its historical roots of fundamentalism which began with the emergence of sacred movement that existed before the inception of the term fundamentalism itself. Therefore for Marsden, fundamentalism now is the amplifier from the tendency of the American culture and the traditional religions.\footnote{Garaudy argues differently, fundamentalism does not exist in the dictionary the great Roper until 1966. But a small dictionary of La Rose in 1966 has defined it generally, "The attitude of the people who rejected the creed adjustment, accordingly with the new situation and conditions". He thinks that this definition in French have been worn by Catholic Christians, whereby a contradiction occurred within the reformers since the time of Pope Xand then after the Congress at Vatican II in 1966.\footnote{Garaudy, Roger. Al-asobiyyah al Mu'asirah:AsbabuhuwaMazahiruhu. Ta'rib Khalil Ahmad Khalil (Paris, Dar Alfain, 1992) 13.}
From this historical analysis, we can find the common thread of the term fundamentalism in the tradition of the Christian religion with various flow, despite that some people hesitate to denominate themselves with the fundamentalists, as a handful of people in the United Kingdom would prefer as "the Guardians of the Gospel". However, this term is not popular and quite the opposite of fundamentalism. The term fundamentalism sometimes tends to be negative and taunting, but also serves to give a restriction against one particular condition, as for the term of "Evangelicals Movement" which is closely related to politics in the Church. While many people have allergies and avoided the term fundamentalism, thus the Protestant adherents are who proudly holding it and wear it to differentiate themselves with those who prefer to be called as "Defender of the Creed". However, along with this definition which tends to be this negative, certainly no one would use it. This is so called with the arbitrariness of language. From here, the word fundamentalism has ambiguous meanings and the foxes changed in accordance with the opinions and attitudes of people who interpret it. The intent and the purpose will differ accordingly to the conditions and needs. Then sometimes the term fundamentalism only covers the specific groups, such as the advocate of the Jews in Israel, or the movement for the liberation of Tamil in Sri Lanka or the Hindus against foreign missionaries in India. Lately, it’s more linked and identified with Islamic fundamentalism.

Nancy T. Ammerman stated that fundamentalists also claim that the only sure path to salvation is through a faith in Jesus Christ that is grounded in unwavering faith in an inerrant Bible. The inerrancy of the Bible is the central idea of fundamentalism. They insist that true Christians must believe the whole Bible, the parts they like along with the parts they dislike, the hard parts and the easy ones. The bible can be trusted to provide an accurate description of science and history, as well as morality and religion. And only such unfailing source can be trusted to provide a sure path to salvation in the hereafter and clear guidance in the here and now. As Kathleen Boone has pointed out, fundamentalists imagine themselves either steadfast in absolute truth or whirling in the vortex of nihilism.

The fundamentalists themselves reject this definition, because they do not represent the beliefs of their religious beliefs, but only for certain sects and factions. In the Christianity for example, they prefer to call themselves a True Christian or just a Christian. Because any criticism addressed to him means blasphemy over the religion itself. This view becomes a core part of the process of the rise of fundamentalism. If we drill down to the basics of fundamentalism in the Gospels, the Qur'an, as well as other sacred scriptures, we will not find it. We will only find in the understanding of religious texts. Unfortunately this understanding is often

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considered part of the religion. Here, fundamentalism actually serves as an ardent religious understanding that developed and practiced in ancient times, which now just a mere glance and interpretation.

It seems that much of the difficulty for scholars in reaching a consensus on a definition of fundamentalism stems from the rich diversity of thought and belief claims made by fundamentalists, even within the a given faith tradition. Differences among fundamentalists themselves may reflect deeper or more meaningful appropriations of truths that remain as much assured and absolute as they are evasive and problematic. The problems will remain as the issue is developing from time to time.

THE PHILOSOPHY OF FUNDAMENTALISM

Philosophy means knowledge or body of knowledge or wisdom. It’s a study of general and fundamental problems concerning matters such as existence, knowledge, values, reason, mind, and language. Fundamentalism has many philosophies looking into the variety of reasons and its background. Defining the term fundamentalism is not an easy task because fundamentalism is such a commonly and loosely used term, thrown like a baseball in the media, backyard arguments and political arenas. Sometimes the term is used to describe any group that takes religion seriously or that views religion’s role in public life to be greater than the labeler would wish it to be. The term also might be used for those who are too religiously confident or who engage in any sort of action out of religious conviction. Thus, not only are the Christian religious right in the United States and the global al-Qaeda Muslims called fundamentalist, but so too are local parent groups who want restrictions placed on the internet access in local school. Groups that want their religion practices purely are called fundamentalist. Therefore it is more appropriate to say that fundamentalism is a contextual phenomenon.

Fundamentalism was started as a movement based on the idea of biblical inerrancy and further developed into many forms of religious movement. However, the idea was still surrounding the sacred text and literal reading of selective one. Fundamentalist believe that their holy book has supreme authority over what to believe and how to act, however fundamentalists’ interpreter of the book is selective. They choose specific ideas from it and emphasize them which later provide justification for resistance strategies and tactics. The selection is necessarily to justify the act from the religious legal perspective. Fundamentalists will use their sacred text as the framework and justification for all thought and

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action, however trivial some such uses may appear from the outside. The sacred texts used for this purpose were not many and in fact relatively partial. In Islam for instance, intellectuals of Qur’anic exegesis or al-mufassirën have pondered the meanings with much different approach from them but still what is taken into account is their version. Therefore, the texts understanding from their perspective is what being measured and should not be argued in one way or another. Inerrancy of holy book turns into inerrancy of its understanding.

The popular definition of fundamentalism is the claim to “derive political principles from a sacred text,” which serves to legitimize ancient secular norms and to judge their adherence to or deviation from the text on a case-by-case basis. Fundamentalist beliefs in inerrancy of holy book and therefore very selective or even not dare to have an outsider perspective. The selected verse should serve their purpose literally and provide necessary justification. Any act of questioning or different interpretation will be resulted a major conflict and must be avoided no matter what. For that purpose, transmission of knowledge is doctrinal and strictly one direction. No room for any different interpretation and all disputes aroused will be referred to the supreme leader or highest authority, which then very rare to happen. Holy book cannot be wrong and has an element of divinity. Divinity does not provide any room for doubt. Total obedience is required in order for the organization to achieve the intended goals.

The selected texts mainly in the area of fight or war as the fundamentalist believe that they are under attack and in the state of war. According to Marsden, fundamentalist main of act are to create chaos and radical encounter to the opponents. He identified fundamentalists as those who are eager to go for war in the name of God. War means ability to sacrifice oneself for the sake of religion sanctity. Going for war demonstrated as utmost bravery and salvation to God to face the most ruthless enemy of religion and ideology. The true Muslim is the defenders of God. As such, fundamentalists are willing to sacrifice everything once the doctrine is planted into their mind. The motifs could be varied and depends on the doctrine. However it all goes to the same destination, religious liberation from evil opponents.

For fundamentalists, religion is a total way of life. This is not unique to fundamentalism because others can be just as committed to a faith that is vitally and centrally important to their existence. For fundamentalists, however, religion is a systematized and complex system that requires an authoritative base capable of subordinating to itself all other elements of human experience. Fundamentalist do not deny that they find meaning in their faith, in fact, they are quick to identify their

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26 Marsden, G., Fundamentalism and American Culture, 158.
faith as the central meaning of their existence, around which all other life events are interpreted. They are also likely to describe the personal benefits that they receive from their religious faith experience as remarkably similar to the personal needs of: purpose, value, efficacy and self-worth. However, fundamentalists are equally quick to remind us that these are not the reasons for their faith, they are merely secondary benefits.28

Fundamentalism provides an organizing framework for understanding how the world is perceived and experienced. It does so by relying upon a single, authoritative, all-encompassing text in which answers to the significant questions of life can be found. The nature and meaning of life are not simply described, but proscribed as well. Moral codes are provided that are absolute and need not be constantly debated. Adherence to such codes provides a form of life or lifestyle that often is in opposition to the larger world – not simply as rejection, but rather as adherence to values that the larger, often secular security has abandoned. Furthermore, life is embedded in a larger horizon that includes not only a sense of transcendence, but an assurance that death is overcome. Hence what may appear as “foolish” to a secular world is salvation to a fundamentalist believe. 29

Fundamentalists relied a lot to belief than to be skeptical. Such understanding put them beyond the normal minds and shapes the action. Fundamentalists need not worry when events do not go well, as evidenced in a common saying: “I know not what the future holds, but I know who holds the future.”

Most fundamentalist groups, and all Christian fundamentalists, believe in an afterlife of heaven and hell. The present world is only a place of preparation for eternal bliss in the presence of God, or eternal isolation from God in the throes of hell.30 This philosophy put the world is not an end but rather as a mean to an end. Accepting the text is absolute and not a subject for discussion. As the disputes are inevitable among the social life, the solution is always lies within the text. The text does not contradict itself and consider as the blueprint of living. Therefore, all fundamentalists, regardless of tradition, have but one ultimate concern: living by the dictates of the sacred text alone because it alone illuminates the path to fellowship with the Divine Being in this life and in the world to come. No other source of knowledge shall in any way alter the true meaning of the text.

James Barr put characteristics of fundamentalism (in Christianity) as follows:

Strong belief and hold to the inerrancy of book that bible has no mistake.

Deep hatred toward modern theology and modernity and discourage any form of studies which criticize the bible.

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A claim that who deny their teaching is consider infidel.\textsuperscript{31}

Azyumardi Azra, an Indonesian scholar, defines the main principles of fundamentalism into the following categories:

Opposing positions. Fundamentalism, regardless the religion backgrounds, always take an opposing stands towards any threat to the religion. The threat normally within the framework of modernity, secularism, western value and other that endanger the religious norms. The references or benchmarks for assessing the threat level are, of course, scriptures, which is al-Qur’an and Prophetic tradition.

Rejection toward hermeneutic. Fundamentalists reject a critical progressive interpretation toward the holy Qur’an. They emphasize the necessity of literal interpretation of the scriptures due to the inability of ratio to give equivalent meaning. Even though the scriptures shows contradict verses or inconsistencies sometimes, human ratio is not allowed totally to take any action further.

Rejection toward pluralism and relativism. Fundamentalists believe that pluralism and relativism are false and misleading approach to holy book.

Rejection toward historical and sociological approach. Fundamentalists bought the idea that historical and sociological development made the human further away from sacred doctrine of Holy Book. Therefore, they avoid historical and sociological context development of the scriptures and attempt to follow totally the early Muslims life who according to them is the best example of society to interact with holy book.\textsuperscript{32}

4. THE CONCEPT OF HAKIMIYYAH

The immediate effect of terrorist act like Islamic State of Iraq and Syria (ISIS) has been tasted as far as Indonesia context. The rapid emergence of radical beliefs and terrorism in a way has found its followers in Indonesia. The concern is completely understandable where the existences of fundamentalist groups are believed to have direct link to them. ISIS is hard core organization aims to establish the Islamic State (Khilafah) merely through the practice of war or \textit{Jihad}. Establishing the Islamic State and \textit{Jihad} is two of other doctrines listed by this group. Solahuddin elaborated four key doctrines hold by the Salafi-Jihadism as follows: 1. \textit{Qital fi Sabilillah}, war in the name of Allah. 2. \textit{Jihad fardhu ‘ain}, an obligatory jihad for every muslim to re-seize the occupied land by non-Muslim. 3. \textit{Irhabiyyah} (Terrorism), a hostile act of revenge intended to non-Muslim regardless their status, permissible to target the civilian. 4. \textit{Tawhid Hakimiyyah}, a doctrine which believes that sovereignty belong


only to Allah and to establish a state where Islamic law (Shari‘ah) is fully implemented.\textsuperscript{33}

The scholar who is known to loudly express the Hakimiyyah concept is SayyidQutb. SayyidQutb arrived at the concept of Sovereignty (Hakimiyyah) only in his later writings of the mid 1960. However, the project started and developed over many years. During the period of 1925-1935, the seed of the concept can be traced back until finally appeared in his book Social Justice in Islam. In this book, SayyidQutb emphasized a comprehensive and integrated conception of Islam. He expressed Islam as a perfect and harmonious system of life. It is a complete system rooted in the nature of the universe. Islam came to unify all forces and powers, to blend together desires, inclinations and sympathies and to harmonize all tendencies, thus recognizing the integrated unity of the universe, the self and life.\textsuperscript{34}

The concept of “great unity” has become one of the basic principles of his thinking on Sovereignty and the nature of relation between the Creator and the creation, the universe, life and humankind: “There is no supreme authority anywhere except in Allah”.\textsuperscript{35} In SayyidQutb’s view, all the teachings of Islam are rooted in this great principle and from it all Islamic theories, laws, commandments, provisions for worship and social relations are derived. SayyidQutb in his further explanation of the nature and the meaning of Sovereignty maintained that the universe, including life and man issued from the absolute Will of God and is regulated by His law. Every part is in harmony with all parts in an integrated unity. Every part has a reason for being and that is related to this complete and absolute harmony.\textsuperscript{36}

SayyidQutb says: “The universe is regulated by one single law that binds all its parts in a harmonious and orderly sequence. This systematic arrangement is the creation of Hakimiyyah. However, the multiplicity of essences or beings leads to a multiplicity of wills and these give rise to different rules, different decisions and judgments. The will is the manifest expression of a willing essence, and law is the manifest expression of the effective will. If that was not so, the unity which regulates the system of the whole universe and harmonizes its course, direction and behavior would disappear and disorder would follow to the disruption of the harmony”.\textsuperscript{37}

According to SayyidQutb, man is part of this harmonious system; his place, role and his life are ordained by hakimiyyah. The law of hakimiyyah is constant and deals with man’s essence that is also constant. For SayyidQutb, constant (thabat) is one of the characteristics of Shari‘ah. To him, constant mean that the Shari‘ah is firm and stable. This does not mean that it is rigid in its application. Islam’s basic doctrines are fixed and they can apply to all human situations. Gradual alterations and developments in life in general cannot change man’s nature into another being.

\textsuperscript{33}Solahuddin, NII sampai JI: SalafyJihadisme di Indonesia (Jakarta: KomunitasBambu, 2011), 7-8
\textsuperscript{35} Shephard, p. 43.
\textsuperscript{36} Shephard, p. 30.
\textsuperscript{37}SayyidQutb, Fi Zilal al-Qur’an (Cairo: Dar al-Shuruq), vol. 4, p. 2373
That’s way people must cooperate among themselves in accordance with the Shari’ah, the law of hakimiyyah, and they must take their place in the harmonious system. The Creator does not leave humanity nor any living being without direct guidance and continual care, since His absolute Will is in continuous and direct contact with the whole universe and with every individual being in it.38

The concept of hakimiyyah related to SayyidQutb argues that the Muslim ummah does not exist and Islam no longer exists. SayyidQutb says: “The Islamic society today is not Islamic in any true sense”.39 In this regard, SayyidQutb pointed that the ummah cannot be called ummah if it does not firmly establish itself on the shari’ah of Allah. In the sense of this definition, the ummah does not exist and thus Islam is no longer exist as a system governing the affairs of the ummah. Here SayyidQutb distinguished the ummah and individuals and emphasized the reason for this. To him, ummah does not exist but there are individuals and every individual is governed by his creed and his morals.

SayyidQutb put categories for individuals above; Muslim individuals and individuals who think of themselves as Muslims. As for these categories, the individuals who are struggling to put Islam into effect in their social, legal and economic system are Muslims, but the individual who does not stand for this cause cannot be called Muslim. However, in the absence of muslim, Islam as a system governs the affairs of the absent ummah as well. This does not mean there is no Islam at all. Islam is absent only in the socioeconomic, legal and political systems which govern the affairs of society.40

In SayyidQutb’s view, it is not sufficient that Islam once lived in the past and created a complete, soundly structured society in the age of the Prophet and the early caliphs. Here SayyidQutb indicates that the reality of the existence of Islam and its societies left its characters on the pages of the history of humankind.41 Thus, when SayyidQutb says that Islam is no longer exist, he means that Islam is no longer existing as a system that governs the affairs of society.

FUNDAMENTALISM AND FANATICISM

In his work, Ahmad Youisif42 has discussed fundamentalism as one of the big challenges faced by the contemporary Muslim world. He found that there has been strong tendency to associate Islam with the term “fundamentalism” despite many scholars are arguing and identifying profoundly the real context of the issues. Fundamentalism has interestingly always led to fanaticism even though they both came from different roots. Fundamentalism is originally from Christian ethics and tradition while fanaticism means going into extreme and overly zealous regarding

38 Qutb, Fi Zilal al-Qur’an, vol. 1, p. 556.
40 Op.cit, Shephard, SayyidQutb and Islamic activism, p. 321
41 Ibid, p. 320
42 Ahmad F. Youisif, Professor of Islamic Civilization and Contemporary Issues, University of Sultan Sharif Ali, Brunei Darussalam.
In the following lines, Ahmad Yousif indicates the trend of religious fanaticism and fundamentalism in the recent decades. In November 1979, at 5:30 am, a powerful force of armed militants at the Grand Mosque in Mecca (Saudi Arabia) pushed their way into the praying crowd and declared that the long-awaited Mahdi (Messiah) had arrived. The more than 300 members of this militant band and their families were led by Juhaiman al-Utaiba, who had come to cleanse Islam before the end of the world.

In September 1982, hundreds of Palestinians in the Beirut refugee camps of Sabra and Shatila were slaughtered by the Christian militia with the tacit consent of the occupying Israeli army.

In April 1983, the U.S. embassy in Beirut was demolished by a suicide bomber in which seventeen people were killed. In the same year, the U.S. Marine Corps barracks near the Beirut Airport was levelled by a suicide truck in which 241 died. Islamic Jihad claimed responsibility for both attacks.

In June 1984, the Indian government invaded the Sikh Golden Temple, resulting in the deaths of more than 1000 Sikhs. Sikh nationalists revenged the attack with the assassination of Prime Minister Indira Ghandi later that same year, and also with the hijack and destruction of an Air India 747 jet the following year.

The shootings at a Jewish day care centre in California on August 10, 1999, by a Christian Identity activist rekindled the fear and anger evoked by the bombing of the Atlanta Olympic Games, the 1995 devastation of the Oklahoma City federal building, and a rash of abortion clinic attacks throughout the decade.

Beginning in the aftermath of September 2001, suicide bombing become the major weapon of armed struggle for Palestinian. By the end of June, 2002, the total casualties for Palestinians far exceeded that of Israeli Jews. Suicide bombings have instilled fear and hurt the economy in Israel, but Palestinians suffering has nevertheless far surpassed Israeli Jewish suffering.

The new millennium has witnessed long standing political conflicts of a grave nature around the world involve several Muslim communities such as Palestinians, Bosnians, Albanians, Chechens, Afghans, Kurds, Iraqis, Kashmirirs, Uighers and Moros. The tragic events of 9/11 have caused a massive Islam phobia in the West. Many non-Muslims have come to believe that Islam is a religion of intolerance, militancy, barbarism, or terrorism. The media has purposely portrayed Islam as the enemy of modernisation, cultural pluralism and human rights. As a result, a deep mistrust of each other has developed in the West and in the Muslim

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44Ibid.
world. As a matter of fact, all religious communities, the existence of phenomenon of extremism, radicalism or militancy is confined to a very small group which misunderstood the concept *Jihad fi sabil Allah* (Striving in the path of Allah). Furthermore, it is so unfortunate that these acts of small groups got viral and developed into massive misunderstanding in the West. To the non-Muslim world today, *Jihad* is generally understood as holy war or any kind of terrorist act, while the actual meaning is much wider than what has been confined. Consequently, those who espouse the use of violence are mistaken in assuming that it is obligatory to fight the disbelievers even though they are at peace with the Muslims. In this regard, those who subscribe this idea are guilty of transgressing the limits imposed by Allah as stated in the Qur’an, “And fight in Allah’s cause against those who wage war against you, but do not commit aggression, for verily Allah does not love aggressor”. Contrary to the claim of some militants, this verse is not abrogated for a particular time and place, rather the categorical statement that “verily Allah does not love aggressors” is a permanent principle in Islam.

The association of *jihad* with terrorism in the media is a gross distortion of Islamic teaching. The problem of extremism is a problem shared by all religions. Such association is a result of prejudice toward Islam and Muslim communities. The prejudice is in place due to the current state of Muslim world which is challenging and has great potential to trigger extremism. Poverty, social injustice, corruption, bad governance and low quality education found in many Muslim countries today. Islam is a religion of peace and moderation which encourages its followers to avoid excessiveness and laxity. The Qur’anic discourse on *wasatiyyah* indicates that Allah has chosen Muslims to be the genuine believers of Islamic monotheism (*tawhid*), follower of the Sunnah of Prophet Muhammad, and a community justly balanced (*ummatan wasatan*). The commentaries of the verse 143 in surah al-Baqarah tells us that Islam came to moderate the ways of previous nations which had either become extremely legalistic or had gone to the opposite extreme. Muslims are advised to live their life in balance between spiritual and worldly activities. They are warned not to neglect worldly affairs while focusing on religious duties. Even when it comes to performing good deeds, Muslim are encouraged to pursue a path of moderation.

**MODERATION FOR GLOBAL PEACE**

Since the very beginning of Islamic era, Islam has always promoted moderation and tolerance or *wasatiyyah*. In the Qur’an, Allah s.w.t calls the Jews and Christians not to exceed the religious boundary. Allah says:

“O People of the Book, (Jews and Christians) do not go beyond the bounds in your religion and do not say concerning Allah (anything) except the Truth. Surely al-Masih, Isa son of Maryam, was only the Messenger of Allah, and His Word that

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45 Surah al-Baqarah (2): 190.
He cast forth to Maryam, and a Spirit from Him. So, believe in Allah and His Messengers, and do not say, “Three.” Refrain; most charitable is it for you; surely Allah is only One God. All Exultation be to Him—that He should have a child. To Him (belongs) whatever is in the heavens and whatever is in the earth; and Allah suffices for an Ever-Trusted Trustee.”

Ibn Kathir in his exegesis explains the above verse as follow:

“Allah forbids the People of the Scriptures from going to extremes in religion, which is a common trait of theirs, especially among the Christians. The Christians exaggerated over ‘Isa until they elevated him above the grade that Allah gave him. They elevated him from the rank of prophet hood to being a God, whom they worshipped just as they worshipped Allah. They exaggerated even more in the case of those who they claim were his followers, claiming that they were inspired, thus following every word they uttered whether true or false, be it guidance or misguidance, truth or lies.”

The Qur’an refers the Jews and Christians as People of the Book. They were among the most discussed subject in the Qur’an and Islamic history due to their proximity to Islam. History has demonstrated how Islam allows non-Muslim to practise religious freedom, especially to the People of the Book. The freedom continued during the period of the Caliphate al-Rashidun as well as the following Islamic rules. Jews in particular has enjoyed numerous privilege under Islamic governance and yet they returned the favour viciously. Prophet Muhammad (PBUH) has shown a great deal of tolerance to non-Muslims during his lifetime in both Mecca and Madinah. In one authentic Hadith, the prophet said, “Anyone who hurts a dhimmi hurts me, and who hurts me, hurts Allah”. In another hadith, the Prophet said, “whosoever persecutes a dhimmi or usurps his rights or took work from him with evil intentions, I shall be a complainant against him on the Day of Resurrection”.

It has been witnessed that, when Prophet Muhammad migrated to Madinah in 622 CE, he introduced a treaty that has granted everyone in the city, including the Jewish tribe, freedom of worship, protection of their place of worship, their life and their property. This practice has been respected and safeguarded throughout Islamic history. During the early years of Madinah period, several Christian elders, learned man and religious leaders from Najran had an intense debate with the Prophet about the Islamic standpoint on Christianity. About halfway during the discussion, the

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49 Dhimmi is a non-Muslim citizen of an Islamic state.
Christian delegation went out to perform their mass (prayer). The Prophet invited them to perform their prayer in the mosque, which they did. When their dialogue with the Prophet had ended, the Christians signed a treaty in which the Prophet guaranteed to protect their religious rights and to preserve the sanctity of their monastery, provided the reciprocated by showing respect for Islam and the emerging Islamic state in Madinah. 52

Another incident that reflects the tremendous tolerance and respect given to non-Muslims was following the Battle of Khaybar, whereupon the Prophet ordered all scriptures taken from the Jews to be returned to them. The event shows what a high regard the Prophet had for their scriptures. His tolerant and considerate behaviour impressed the Jews who could never forget that the Prophet did nothing which trifled with their sacred scriptures. 53 When the Romans conquered Jerusalem in 114 CE, they expelled all Jews from the city and imposed a complete ban on their re-entry. In contrast, when Caliph Umar Ibn al-Khattab conquered Jerusalem in 638 CE, Christians and the Jews were allowed to stay. 54 The text of the treaty of surrender of Jerusalem was written by Mu’awiyah and signed by the Caliph and by Sophronius, Patriarch of the City on behalf of the Christians, says:

“In the name of Allah, the Beneficent, the Merciful. This is the guarantee granted to the inhabitants of Aelia by Umar, Servant of God, Commander of the believers. He guaranteed for them the safety of their persons, of their goods, of their churches and crosses – whether in good state of repair or otherwise – and generally of their religion. The churches will not be changed into dwellings, nor destroyed. Neither they nor their other properties will suffer any damage whatever. In matters religious, no coercion will be exercised against them, nor will any of them be hurt.” 55

Four centuries later (in 1099 CE), the harmonious atmosphere which existed under the Muslim rule ended when Christian crusaders captured Jerusalem and were merciless toward all non-Christians including many innocent people. The Christian victory over Jerusalem did not last long however. Less than a century later in 1187 CE, Jerusalem was recaptured by Muslim caliph Salahuddin al-Ayyubi and was returned to be the city of the threesemitic religions. Muslims ruled Spain for 800 years, during which time Jews and Christian lived harmoniously and were allowed a great level of religious freedom. When the Christian finally recaptured Granada in 1492 CE, Muslims and Jews who remained behind were given the choice of

baptism, exile or death. While the Muslims had shown great tolerance and respect for Christianity, it was obviously no place for Muslims in the once lost and now re-conquered lands of Christendom.

The most contemporary historical example of Muslim tolerance toward non-Muslims was demonstrated by Muslims during the Ottoman period. During that time, all non-Muslims were allowed to follow their own religions, provided that they respected Muslim supremacy and paid their taxes. The administrative system employed by the Ottomans, known as the *millet* system, regarded religious communities as autonomous social units, which enjoyed both administrative and legal independence. Each millet was headed by clergymen who were responsible for the civil status, judicial process, church property, education, charity and even tax collection. This system which enabled Christian, Jews and Muslims to live side by side in the same state under the same sovereign, yet remain subject to different laws and different officials, served the Ottoman Empire well for four centuries.

Due to the immense tolerance, freedom and autonomy given to religious communities, Istanbul became a safe haven for all kinds of religious refugees from Europe. According to Lewis, the Turkish capital in the 17th century was “probably the only city in Europe where Christians of all creeds and persuasions could live in reasonable security and argue their various schism and heresies. Nowhere in Christendom was this possible”.

The history has described how the concept of *wasatiyyah* was not merely a theory without proof. Moderation, toleration or *wasatiyyah* was the practice of the Prophet Muhammad, his companion and followers of the early Muslims. A leader who strikes *wasatiyyah* upon the people has proven to be very effective and indeed extend the duration of successful leadership. Those periods of harmony in Islamic civilisation were not short and full of the joyful milieu enjoyed by all parties regardless of their background. The human nature is inclined to treasure lifetime of peaceful surrounding rather than the chaotic one. Indeed, *wasatiyyah* is one of the successful fruits of Islamic civilization for it has gone through both theoretical conception and experimental application. Thus, it is established that Islam has initiated an interreligious harmony through the concept of *wasatiyyah*. Fazlur Rahman said in this regard:

“The Islamic civilisation was the first in the world which brought about a highly fruitful co-operation among peoples of different faiths, cultures and races in the fields of science and philosophy, medicine and literature. As a result a brilliant

intellectual culture was produced wherein Muslims, Christians, Jews, Zoroastrians and others participated on an equal footing.”

7. CONCLUSION
The complexity of religious life in the modern world can be seen through all religions and not only Islam. The problem always lies between being excessive or too liberal in the religious practices and dogma. All civilizations will fall when they misunderstood freedom. Freedom goes with moderation or wasatiyyah and with the right approach to mankind, for the sake of his well-being. If freedom is a right, it belongs to the positive qualities and virtues, and if it is derived from human’s nature, then it is not the standard of practice. Same marriage sex for example, is a kind of freedom that is unnatural and cause chaos to human’s descendant. Qur’an has made it very clear, people of the Prophet Lut when they misbehaved, Fir’aun when played role as God himself, they were demolished. And Muslim civilisation too, fell when their leaders were drunk and racists. In short, adopting the principle of wasatiyyah will ensure a lengthy time of prosperous, balance, and tolerance that sustain harmonious bonding in plural society, and therefore should be practiced by Muslim and non-Muslim as a whole. After all, we are living in the same earth with similar dream to have a sustainable interreligious harmony amongst world community.

Islam urges the application of wasatiyyah in the Muslim’s daily life and interaction to the other fellow Muslim and non-Muslim. Muslims are asked to be good with their neighbours and the Qur’an doesn’t differentiate between Muslims and non-Muslims in this regard. In today’s plural world and social media control, being extremist is not a wise option and could negatively portrayed Islamic image to the world. Religious tolerance has been a hundred years of practice within the Muslim society and proven to be very much effective. The failure of certain group or people in today’s world to understand the beauty of the concept is not the failure of Islam. The failure is primarily due to one’s neglected of the Islamic civilisation historical fact.

8. BIBLIOGRAPHY

Al-Qur’an al-Karim


ACCOUNTABILITY IN FINANCIAL REPORTS: DEVELOPING A FINANCIAL REPORTING FRAMEWORK FOR ZAKAT AND WAQF INSTITUTION IN THE PHILIPPINES

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ABSTRACT

Specialised institutions are created which administer the collection and disbursement of zakat and waqf funds. These institutions have the responsibility to disburse the collected funds to the rightful beneficiaries efficiently and effectively. One way of discharging the institutions accountability is through financial statements. However, the financial reports of the existing institutions does not address the specific needs of users in this context. In addition, the current practice is not comparable due to absence of a standards applicable to zakat and waqf funds. This study aims to develop a financial reporting framework suitable for zakat and waqf institutions through document review of relevant literature. The theoretical underpinning the study is dual accountability.

Keywords: Accountability; Financial Statements; Islamic Accounting; Waqf; Zakat

1. INTRODUCTION

Islam, as a comprehensive religion, encompasses the spiritual, social, economic and other aspects of life of individuals and the society at large (Al-Qaraḍāwī, 1999a). Other than the fulfillment of spiritual obligations (e.g., prayer), the Muslims are obliged to give zakat to the rightful beneficiaries. Similarly, voluntary donations such as sadaqah and waqf (Islamic endowments) are likewise recommended (Sadeq, 2002). Islam, as a comprehensive religion, deals with the socio-economic development of humanity. It manifests through the comprehensive framework provided in Islam to eradicate poverty (Sadeq, 2002).

The word zakat has different connotations (Abdul Rahman, 2010, p. 176). Linguistically, the root word of zakat means cleanliness, growth, blessings and praise. Zakat is also defined as a legal transfer of ownership of a specific wealth to the rightful beneficiaries under specific conditions. From a theological point of view, zakat purifies the wealth from physical and spiritual impurities.
Zakat is commonly interchanged with *sadaqah* and tax. Though *zakat* and tax are both mandatory, the former is a directive from Allah SWT while the latter is imposed by a taxing authority (e.g., government). The rate used in *zakat* computation is between 2.5 percent to 20 percent on specific items, while tax rates vary depending on the rules set by the taxing authority (Al-Qaraḍāwī, 1999a). *Sadaqah* and *zakat* are both enjoined in Islam, but unlike the former, which is voluntary, the latter is compulsory similar to the other pillars of Islam.

Even though paying *zakat* requires an outflow of resources, Islam never considers it a decrease in wealth, rather, it is an increase. By giving *zakat*, the tendency of being greedy diminishes (Jaafar, Affif, Amri, & Sahezan, 2011; Sapingi, Ahmad, & Mohamad, 2011). On a macro level, *zakat* would lead to the reduction of social inequality in the society through the transfer of wealth from the rich to the poor (Sadeq, 2002). As a result, the concentration of wealth is redistributed to the less privileged sector of the society which not only alleviates poverty, but it also creates opportunities to improve the quality of life of the general public (Abu Bakar & Abdul Rahman, 2007).

*Waqf*, on the other hand, is the singular form of the word *awqaf*. *Awqaf* is derived from the Arabic word *waqafa* which literally means hold or stop (Ihsan & Hameed Hj. Mohamed Ibrahim, 2011). *Waqf* can also be defined in different ways: linguistically, *waqf* means “stand still, hold still, not to let go” (Ahmed, 2004, p. 28). On the operation point of view, *waqf* means restricting the title of an owned asset from transfer and disposal and allotting its benefits for a specific purpose in accordance to the will of the donor (Sadeq, 2002). Similarly, *waqf* is defined as “holding certain property and preserving it for the confined benefit of philanthropy and prohibiting any use or disposition of it outside its specific objective” (Kahf, 2003, p. 1). The definitions provided suggest that *waqf* is a perpetual charity since only the benefits are to be used for specific purpose(s), while the asset cannot be transferred nor be disposed.

Sadeq (2002) argues that *waqf* addresses two of the three characteristics of poverty-related phenomena (i.e., non-income factors and lack of access to opportunities). *Waqf* helps in eradicating poverty by improving the non-income aspect such as orphanages, public infrastructures and religious establishments like mosques and Islamic educational institutions and providing direct access to physical facilities, resources and employment (Sadeq, 2002).

Separate institutions are established in several Muslim majority countries which administer the collection and distribution of *zakat* and *waqf* (Ahmed, 2004). These institutions focus on managing and maximising the collection of *zakat* and other form of voluntary charity including *waqf*. Throughout the history, these institutions played a vital role in alleviating poverty through the provision of education and

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61 *Sadaqah* is a voluntary charitable donation. The word “*sadaqah*” is derived from the root word *sidq* implying giving away goods and funds for the sake of Allah (Al-Qaraḍāwī, 1999a).

62 Abbreviation of *subḥānahu wa-taʿālā*. Its literal meaning is Glory be to Him, The Most High.
physical activities (Kahf, 2003, p. 6). In the contemporary setting, *waqf* assets collected by the institutions provide various services including religious-oriented educational institutions, orphanages, mosques, medical centers and shopping complexes.

In the case of Malaysia, different extensive awareness programmes are being initiated by religious groups with the support of state governments (Ahmed, 2004). In fact in 2002, *zakat* on employment income was declared by the National Fatwa Council as compulsory upon the eligible. As a result, the funds raised through *zakat* increased (Abu Bakar & Abdul Rashid, 2010).

Unlike in other Muslim majority countries, no similar institutions are operating in the contemporary Philippine setting. The last formal *zakat* organisation administering *zakat* system was managed during the reign of the Sultanates. After its abolishment in the late 1970s, no other official *zakat* organisations were established that serve the same function (Ariff, 1991, p. 35). As a result, Muslims in the Philippines especially the employees of various institutions/agencies pay *zakat* independently and distribute to whosoever they consider qualified to receive it (Andam, 2016, p. 74). Since *zakat* collection and distribution are not managed formally, problems on low *zakat* collection and inefficient *zakat* distribution arise (Muhammad, 2008).

*Zakat* and *waqf* compliments each other in providing services to the destitute part of the society (Yaacob, Petra, Sumardi, & Nahar, 2015). Some successful institutions managing these funds were dated more than a thousand years (Sadeq, 2002). However Yaacob et al. (2015) argues that some institutions also vanished due to mismanagement, colonialization and imperialism. Since the nature of the management of *zakat* and *waqf* requires trust and integrity, discharging the accountability is crucial in ensuring the continuity of the institution (Kahf, 2003; Yaacob et al., 2015). Thus, this study focuses on developing a financial reporting framework for *zakat* and *waqf* institutions to discharge the accountability of managers to various stakeholders.

According to Cajee (2007) as cited by (Ihsan & Adnan, 2009), publication of academic research is important in the success of revitalisation. Thus, as one of the first research on financial reporting of *zakat* and *waqf* institution literature in the Philippines, it can contribute to the revitalisation of *zakat* and *waqf* institution in the country.

According to Rashid (2008), the number of *waqf* materials (e.g., published articles, theses, dissertations, newspapers, magazines, conference proceedings, book reviews and online materials) is scant. His study covered Muslim majority countries such as Bangladesh, India, Indonesia, Malaysia and Pakistan. In contrast, non-Muslims were starting to show interest on *waqf* literatures. In fact, non-Muslim scholars organised the very first international seminar on *waqf* held in Jerusalem in 1979.

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63 Sultanate is a form of centralised government first introduced in the Philippines in the fifteenth century (Stark, 2003).
Thus, the researcher is motivated to contribute to the limited zakat and waqf literature especially in the context of Philippines.

The researcher is motivated to embark on this study because the revitalisation of waqf institutions creates the need to establish good accounting system (Masruki & Shafii, 2013). As the establishment of a zakat and waqf institution in the Philippines is still at initial stage, designing an accounting framework for reporting is important. Understanding how the financial accounting and reporting activities help fulfil accountability of trustees to stakeholders (Yaacob et al., 2015). Yaacob further argues that the financial reporting literatures guide the empirical practice of zakat and waqf institutions for its future sustainability.

Along with the revival of awqaf institutions, the attention to the call for waqf accounting has been emerging. The modern waqf management emphasises accountability and transparency. As part of good governance and best practices of awqaf institutions, accounting is believed to be able to improve the accountability and transparency of the mutawalli. Besides, accounting is a tool for the trustee/mutawalli to discharge his accountability to the stakeholders. The perception of the mutawalli regarding responsibility and accountability influence the financial reporting practices of waqf institutions (Ihsan & Adnan, 2009). Defining accountability is essential as it is deemed critical to regulatory functioning (Cordery and Morley, 2005). While Cutt and Murray (2000) state that accountability is a foundation of performance measurement, evaluation and reporting.

This study aims to develop a financial reporting framework for zakat and waqf institution underpinned by the theory of accountability. This study would examines the financial reports of existing zakat and waqf institutions and other documents texts (e.g., Qur’an and Hadith), AAOIFI Shariah Standards, and financial reporting standards for NPO (e.g., US GAAP, SORP).

Since the financial statements of some zakat and waqf institutions are audited and are available online, it would be examined to determine the current accounting practices (i.e., identifying, measuring and reporting) of well-established zakat and waqf institutions.

This study attempts to contribute to knowledge, theory, policy and practice. Firstly, it contributes to the literature on accountability on financial reports. This study generates knowledge on how financial reporting are being devised as strategic tools in the institution’s accountability policy framework. The financial reports of a zakat and waqf institution transcend beyond the information required by statutory requirements and accounting standards for profit and not for profit organisations (Yaacob et al., 2015).

This study contributes to the literature of accountability reporting by simultaneously examining zakat and waqf. This study develops a comprehensive disclosure index measuring both funds. Prior studies focused primarily on waqf disclosure.
The findings of this study can be used by standard setters in formulating a standardized financial reporting framework for zakat and waqf institutions. Given that there is still no existing standards for this specific type of institutions, the financial reporting practices vary. This suggests that comparability issues arises. The information needed by the relevant stakeholders may not be adequately provided due to the lack of basis or standards. Most standards on Islamic Islamic institutions were concentrated on Islamic financial institutions specifically on Islamic Banking. The only available guidelines related on waqf is the AAOIFI Shariah Standards.

The findings of this study can be used by the current religious organisations, interested groups and the soon to be established zakat and waqf institution in the Philippines as their financial reporting framework. With that, the trustees/mutawalli of the institutions can discharge their accountability and provide more useful information to the stakeholders. The institution could eventually maximise collections since the donors are assured that their donations have favourable impact to the beneficiaries as disclosed in the financial statements (Andam, 2016, p. 59). In addition, by presenting the necessary information to the stakeholders in the financial statements, the institutions can attract donors not only locally but also donors from foreign countries.

2. PHILIPPINE CONTEXT

Philippines is one of the developing countries in Southeast Asia. Majority of its inhabitants are Catholic Christians while the Muslims are part of the minority groups at approximately 5 percent of the total population (Philippine Statistics Authority, 2000). In fact, in terms of Christian population, Philippines has the most number in Asia and fifth in the world. As part of the minority groups, Muslims in the Philippines cannot practice their religion as convenient as the Muslims residing in Muslim majority countries.

The Muslims in the Philippines reside mainly in Autonomous Region in Muslim Mindanao (ARMM). In terms of their economic condition, ARMM has the highest poverty incidence among the other regions. In fact, one of the provinces in ARMM, recorded the highest poverty incidence (National Anti-Poverty Commission, 2016). However, the economic condition of ARMM contradicts with the economic development of the Philippines. In 2015, the national poverty incidence of the country dropped to 26.5% (lowest in the last nine years), while in ARMM, the poverty incidence increased from 46.9% (2012) to 53.4 (2015) (NAPC, 2016). The gap between the poor, which is in most cases Muslims, and the rich is too wide.

The functional literacy in ARMM is also a problem in the region. While national rate of out of school youth in 2013 is around 10.6% (4 million), ARMM has the highest across the country with 14.4% (PSA, 2015). With the lack of proper
education, around 65.7% of the population in ARMM are in the agriculture, hunting, forestry and fishery industry (PSA, 2013).

The government normally addresses the issues on poverty (Grindle, 2004, p. 526). However, in the case of Philippines, it can be argued that the solution provided by the government for the welfare of the Muslims may not be effective as evidenced by the economic condition of the Muslims in the Philippines throughout the years. Thus, alternative means can be explored like zakat and waqf to alleviate the problem of the Muslims in the Philippines.

However, another dilemma is the absence of an institution which administers the collection and distribution of zakat and waqf funds. Unlike in Muslim majority countries, where the institutions encourages the Muslims to give zakat and sadaqah through intervention programmes, the absence of such institutions in the Philippines leads to ineffective and inefficient collection and distribution of zakat and sadaqah. Although the religious scholars encourage zakat payments among the Muslims in the Philippines, it is not made mandatory. Employees, for instance, pay individually on a voluntary basis directly to the beneficiaries (Andam, 2016, p.74). As a result, no records are available as to who has already distributed their zakat and who received it. The absence of records makes it difficult to those concerned individuals to promote the maximisation of zakat and charity collection.

Though there is no centralised organisation which administers the collected zakat and waqf in the Philippines, several groups have attempted to establish similar institution which could help alleviate the poverty of the Muslims in the Philippines. For instance, Anak Mindanao Representative Hataman authored the House Bill 5989 regarding the establishment of the Islamic Banking System in the Philippines. The approval of such may lead to the establishment of an institution that centralises the collection and distribution of zakat and waqf. It could first be incorporated in the Islamic bank or a separate institution may be established.

Ranao Council Inc., a civic organization of Muslim professionals are likewise interested in establishing a zakat and waqf institution. Other religious organisations such as the National Commission on Muslim Filipinos (NCMF) are also making preliminary measures for the establishment of such institution through linkages in countries which have experts such as Malaysia.

3. LITERATURE REVIEW

3.1 REVISITING ISSUES ON ZAKAT

3.1.1 Fundamentals of Zakat

Zakat is one of the five pillars of Islam. It is mandatory upon every Muslim together with other commandments like praying five times a day, fasting in the month of Ramadan, pilgrimage to Makkah, and the recital of the belief in the oneness of
Allah SWT and the belief that Muhammad saw\textsuperscript{64} is the messenger of Allah. It requires Muslims to apportion a certain percentage of their wealth more than their basic needs to rightful beneficiaries. These rightful beneficiaries are explicitly enumerated in the Holy Qur’an

“Zakat expenditures are only for the poor and for the needy and for those employed to collect [zakat] and for bringing hearts together [for Islam] and for freeing captives [or slaves] and for those in debt and for the cause of Allah and for the [stranded] traveller – an obligation [imposed] by Allah. And Allah is Knowing and Wise”. (at-Taubah: 60)

Even though zakat is a mandatory religious contribution, Islam does not burden beyond a person’s capacity. Islam at all aspects promotes social justice. Thus, only those who meet certain pre-requisites (i.e., nisab and haul) are obliged to pay zakat. Firstly, only those who reached puberty, sane, and free Muslims are liable to pay zakat. The Muslims should also reach the nisab requirement that is the minimum amount of wealth owned to be liable to pay zakat, which is equivalent to the market value of 85 grammes of gold. Furthermore, not all types of wealth are subjected to zakat. Only those agricultural products, mineral, marine products, gold, jewellery, money, trade, and livestock wealth that are more than the nisab. This wealth should also be growing or have the potential to increase for it to be subjected to zakat (Al-Qaraḍāwī, 1999a).

Haul mandates that the wealth must be outstanding in the owner’s possession for at least one year (Al-Qaraḍāwī, 1999a). It implies that only the excess wealth above the basic needs outstanding for one year is subject to zakat.

A fixed rate of 2.5 percent is used to compute zakat, payable annually using either of the two methods: net current method or net growing capital method. Zakat can also be classified into different categories according to object: individual employment income, business, animals, agricultural products, gold and silver. Various rulings and different rates apply for each of the aforementioned categories (Abdul Rahman, 2010; Al-Qaraḍāwī, 1999a).

Benefits derived from paying zakat can be classified into: individual and societal. On an individual level, giving from personal wealth diminishes the tendency of greed (Abu Bakar & Abdul Rashid, 2010; Al-Qaraḍāwī, 1999b). Tax rebates are also provided in some cases. A Muslim taxpayer can claim a tax rebate\textsuperscript{65} for the amount paid as zakat and sadaqah to official zakat institutions (Abu Bakar & Abdul Rahman, 2007). While on a societal level, since the gap between the rich and the poor tends to widen, zakat is a mechanism that helps decrease social

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\textsuperscript{64} An abbreviation of salla llāhu' alayhi wa-sallam which literally means peace be upon Him. This phrases are always mentioned every time the name of the Prophet Muhammad (saw) is mentioned.

\textsuperscript{65} Section 6A(3) of Income Tax Act states that “A rebate shall be granted for a year of assessment for any zakat, fitrah or any other Islamic religious dues payment of which is obligatory and which are paid in the basis year for that year of assessment to, and evidenced by a receipt issued by, an appropriate religious authority established under any written law”
inequality (Abdul Rahman, 2010; Mustapha & Sapiei, 2005) which is similar to the role of tax (Abu Bakar & Abdul Rahman, 2007). As a result, redistribution of wealth to the society transpires and avoids its concentration in the hands of few (Jaafar et al. 2011).

Moreover, zakat is a means of poverty alleviation (Ahmed, 2008; Khan, 2007). Giving to the poor promotes increased propensity to consume since the marginalised part of the society are given the means to meet their needs thereby contributing to the improvement of the economy (Kasri, 2013). Not only does zakat satisfy the needs of the poor, destitute, and wayfarer, it also serves as the lifeblood of the government. It also provides funds for public affairs of the Muslim community (Al-Qaraḍāwī, 1999a).

While noncompliance of zakat is a matter between Allah SWT and the concerned Muslims, corresponding retribution may not necessarily be imposed in this world, but the people will be held accountable in the hereafter (Al-Qaraḍāwī, 1999b).

Zakat institutions were originally established during the time of Prophet Muhammad (saw) and his subsequent caliphs (Abu Bakar & Abdul Rahman, 2007; Al-Qaraḍāwī, 1999a). Zakat institutions played a vital role and had a significant impact on the society. Contemporary zakat institutions are established to discharge the same function (i.e., collection, administration, and distribution) (Mustafa et al. 2013). However, contemporary zakat institutions lack enforcement while the past zakat institutions were part of the mainstream government (Abdul Rahman, 2010). Most Muslim countries adopt the voluntary enforcement of zakat institutions. However, Malaysia is ahead of other countries in the sense that zakat laws are enforced upon the Muslims. For instance, the fatwa about the compulsion of zakat on employment income had been gazetted in the year 2001 under the Islamic Legal Administration Enactment (Abu Bakar & Abdul Rashid, 2010). The administration of zakat is under the jurisdiction of every state government (Abu Bakar & Abdul Rashid, 2010). For instance, the State Government of Selangor required the Muslim employees within the state to pay zakat on employment income to Selangor Zakat Board by means of salary deduction (Abu Bakar & Abdul Rashid, 2010).

3.1.2 Zakat Compliance

Despite the fatwa issued and the compulsion of zakat on employment income, payment of zakat remains voluntary (Abu Bakar & Abdul Rashid, 2010). In substance, it still lacks enforcement at the state level (Jaafar et al. 2011).

Despite the benefits of zakat and the authority granted to zakat institutions, zakat is still not as thoroughly complied with as tax (Jaafar et al. 2011). One possible reason could be the difference between enforcement. One is mandatory on a federal level, and the other is at a state level or even voluntary. Even in Muslim majority countries where zakat institutions are reinforcing its compliance, zakat collection is still low (Abu Bakar & Abdul Rahman, 2007).
Low zakat compliance is not necessarily due to lack of potential zakat collections. In fact, USD 30 billion is collectable in Indonesia alone, out of the USD 600 Billion worldwide every year (Heikal & Khaddafi, 2014). Moreover, South East Asia is considered fourth in the world giving index (Kasri, 2013). However, the results of prior studies on zakat compliance show completely different results (Jaafar et al. 2011). The problem is noncompliance of zakat by Muslims (Abu Bakar & Abdul Rashid, 2010). For instance, in Malaysia, where zakat laws are implemented on a state level, the compliance rate is still relatively low (Jaafar et al. 2011; Muda et al. 2006).

Several studies have identified possible reasons and solutions to address the problem of low zakat compliance. Some studies focus on the characteristics of zakat institutions regarding their collection, administration and distribution (Mustafa et al. 2013). Other studies emphasise on the factors affecting zakat compliance (Azman & Bidin, 2015; Bidin et al. 2009).

Since the role of zakat institution is crucial in the overall zakat system, prior studies examined the characteristics of the institution that affects its operation and collection (Al Jaffri Saad & Haniffa, 2014; Muda et al. 2006). For example, the good reputation of zakat institution augments the likelihood of compliance. So zakat institutions should build their reputation and secure the trust and confidence of Muslims (Mustafa et al. 2013). One way of building trust is by having transparency in the disbursement of the funds collected to the rightful recipients (Al Jaffri Saad & Haniffa, 2014). Zakat institutions also affect the zakat payers through promotions and advertisements (Kamil, 2005). These provide motivation leading to zakat compliance (Muda et al. 2006). An example is introducing innovative strategies like zakat via online bank transfer or movable counters (Azman & Bidin, 2015). Privatisation of zakat institutions also affects the level of zakat collection; however, the results are mixed (Muda et al. 2006). Other factors such as perceptions of zakat payers on disclosure, stakeholders management, and board capital also affect zakat compliance (Mustafa et al. 2013).

3.2 REVISITING ISSUES ON WAQF

3.2.1 Waqf from Sacred Texts

Waqf is a voluntary charity for the sake of Allah SWT. Voluntary charity such as waqf is highly encouraged in Islam. This noble cause is highlighted in the Qur’an “Never will you attain the good [reward until you spend [in the way of Allah] from that which you love. And whatever you spend – indeed, Allah is Knowing of it”. (Ali ‘Imran: 92)

66 Mustafa et al. (2013) defined “board capital” as “the sum of an individual director’s human and social capital and a proxy for the ability of a board to engage in board roles, such as the provision of resources for the firm”.

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Giving out charity has been narrated in multiple Hadiths. One hadith which highlights the benefit of a perpetual charity is:

“Abu Huraira (Allah be pleased with him) reported Allah's Messenger (may peace be upon him) as saying: When a man dies, his acts come to an end, but three, recurring charity, or knowledge (by which people) benefit, or a pious son, who prays for him (for the deceased).” (Sahih Muslim: Book 13, Number 4005)

The ayah and hadith suggests that aside from zakat, waqf is likewise enjoined in Islam. It suggests that the reward of giving waqf charity outlives the donor. The donor still receives the reward even after death. It also illustrates that the wealth given as a form of waqf must be retained thereupon. It must not be sold, transferred or inherited. On the other hand, the income derived from the property can be given as per the instruction of the donor. The benefits derived from the waqf is not limited to strangers. It can also be assigned to the nearest of kin. The hadith also mentioned the permissibility of the administrator of the waqf to spend a reasonable portion of it.

3.2.2 Development of Waqf Literatures

It is interesting to note that (Hoexter, 1998) grouped the development of the waqf literatures into stages. However, her study is limited to the development of waqf literature in twentieth century. While this study uses proposed stages in presenting the development in waqf literature, additional stages were added to account the latest developments.

The development of waqf literatures can be categorised in to three stages: legal aspect, socio economic and political influence and comparison between and conventional charity (Hoexter, 1998). Additional areas were integration of waqf and into Islamic institutions modern management of waqf institution, case study in different countries.

3.3 ZAKAT AND WAQF REPORTING

As mentioned in the previous section, one of the reasons which hinders the sustainability of a not for profit religious institution is due to the mismanagement of funds. According to Yaacob et al. (2015, p. 300), the accountability aspect of this institutions are still lacking due to various reasons. Among others that are related to financial reporting are insufficient resources to maintain and develop the properties, mismanagement of the funds and issues on transparency. On top of that, the past literatures have not given enough emphasis in the aspect of financial reporting in strengthening the accountability of the institutions (Yaacob et al., 2015). He added that the implications for accountability disclosures in the religious context are likewise unexplored.

Yaacob et al. (2015) mentioned that there is significant variation in reporting and disclosure among non-Islamic charitable entities. This indicates that despite having standards for not for profit organisations, the financial reporting practices of
these institutions still vary. He further highlighted that most of these institutions failed to meet the basic accountability criteria.

Similarly, *waqf* institutions were also found to have varied accounting practices. Studies on accounting practices in *waqf* institutions indicate that there is diversity with regards to accounting and reporting of *waqf* (Ihsan & Adnan, 2009; Masruki & Shafii, 2013). The phenomenon of dissimilarity of financial reports of the *waqf* institutions could be attributed to the absence of accounting standards for *waqf*. The limited literature on *waqf* are silent regarding the technical issues on accounting and reporting (Suhaimi Nahar & Yaacob, 2011). In addition, accountability has not been clearly defined in the context of a religious charitable institutions which leads to the variation in accounting practices (Ihsan & Adnan, 2009).

Thus, to ensure the sustainability of *zakat* and *waqf* institution, the reporting practices must be standardized based on the needs of the users of the financial reports. This can be addressed by developing a financial reporting framework based on the Islamic accountability framework.

**4. RESEARCH METHOD**

This paper addresses the underlying research objectives through literature review and document review. Reviewing the relevant literature is essential in identifying the financial reporting issues of *zakat* and *waqf* institutions and its corresponding solutions and recommendations. This paper reviewed the literature on *zakat* and *waqf* reporting, financial reporting issues on charitable institutions and accountability.

In addition, the financial statements of existing *zakat* and *waqf* institutions, Accounting and Auditing Organizations for Islamic Financial Institutions Shariah Standards (AOOIFI SS) and Accounting standards for not for profit institutions (SORP) were examined. By reviewing these documents, the current accounting and financial reporting practices of *zakat* and *waqf* institutions will be documented and assessed.

Due to the absence of formal *zakat* and *waqf* institution in the Philippines, two institutions from Southeast Asia were selected. The criteria for the selection is based on the accessibility and quality of the financial statements. One of the indications of the quality of the financial statements is if it is audited (Che Azmi & Hanifa, 2015). Since the primary purpose of the study is developing accounting practices and reporting suitable for *zakat* and *waqf* institutions, it must be based on the existing institutions which were found to have best practices. The *zakat* and *waqf* institutions were found to have a good financial reporting practices. In addition, their financial statements were audited, published regularly and accessible online.

**FINDINGS AND DISCUSSION**

**5.1 ACCOUNTABILITY**
The word accountability is derived from the root words “count” and account” (Yaacob et al., 2015). It is also related to the word bookkeeping which is closely related to accounting (Bovens, 2007).

The word accountability can be defined in many ways. It has discipline-specific meanings where different parties can have different definitions of accountability (Ihsan & Adnan, 2009). Accountability in the context of charity is defined as “the charity’s response to the legitimate information needs of its stakeholders” (Charity Commission, 2004, p.2). Thus, providing the appropriate definition of accountability in the context of zakat and waqf institution is essential as it would be the basis of the financial reporting framework of the said institutions.

In the realm of charitable institutions, a different accountability framework is proposed due to the difference in characteristics as compared to a profit oriented institution (Cordery & Baskerville, 2005). In relation to this study, an accountability framework should be defined. In addition to the difference between profit oriented and charitable institutions, zakat and waqf institution is unique due to its religious aspect. Thus, defining the accountability in this context is crucial in determining the financial reporting practices suitable for zakat and waqf institutions.

5.2 DUAL ACCOUNTABILITY

Accountability in Islam is argued to be dual. The duality concept of accountability transcends beyond the temporal world. In line to this argument, the accountability communicated through the financial reports of zakat and waqf institutions transcends beyond the worldly objectives. (Ihsan & Adnan, 2009).

Hisham (2006) argues that the preparers of the financial statements are required to address both the primary and secondary accountability. The primary accountability is the sacred accountability towards Allah (Suhaimi Nahar & Yaacob, 2011). The preparers of the financial statement must ensure that the operations undertaken by the institution (including financial reports) are Shariah compliant. Secondary accountability refers to the accountability towards different stakeholders including the donors, beneficiaries, government, and the public at large (Suhaimi Nahar & Yaacob, 2011). The other term for the transcendental accountability is vertical accountability while the accountability to other human beings is horizontal accountability (Sulaiman et al., 2009).

The intangible accountability to Allah is conceptualised in different Islamic concepts. The core Islamic concepts in the conceptualisation of the framework are Tawheed and Khalifah (Suhaimi Nahar & Yaacob, 2011). The Islamic concept Tawheed commands the Muslims to worship and submit to Allah. Discharging the accountability is part of servitude to Allah (ibadah) and virtuous deeds (amal saleh) which benefits the humanity in this world and the hereafter (al- Falah). In an Islamic point of view, accountability is related to the word trust (amanah) and vicegerency (khalifah) (Sulaiman et al., 2009). As the human beings are vicegerents
in this world, the ownership of resources is a trust from Allah SWT first and from other human beings.

Figure 3.1
Dual Accountability (Ihsan, 2007)

One of the most cited accountability framework in waqf literatures is the waqf accountability model by Ihsan (2007). As discussed earlier, all matters (including discharging accountability through financial reporting) are primarily for Allah SWT (hablum min Allah) and secondarily for other users (hablum min an-nas) of the financial statements.

The nature of the primary accountability to Allah SWT is transcendental (i.e., cannot be perceived through the senses). One may argue how this primary accountability be discharged given its transcendental nature. Shahul (2000) argues that by fulfilling the commandments of Allah SWT and by avoiding His prohibitions, one may fulfil the primary accountability. These commandments and prohibitions are based on the Qur’an and Hadiths.

The metaphysical accountability to Allah SWT manifests through the financial reports provided by zakat and waqf institutions (Ihsan & Adnan, 2009). They further argue that since accountability to Allah SWT is interrelated to accountability to human beings, providing necessary information to the users on the shariah compliance of the organisation also fulfils the former. Sulaiman et al. (2009) argues
that the information provided in the financial statements is an important mechanism in discharging accountability.

The users identified in the accounting framework, underpinned by the dual accountability, differ with the users in a for profit organisations. Rather than having investors (i.e., expecting profit) as primary users, the donors in the context of zakat and waqf institution expects no financial return. The scope of the information needed by the users in zakat and waqf institutions encompasses the information needed by their conventional counterpart since the information on shariah issues must be present in the financial statements.

Based on the accountability framework, the accountability to the stakeholders can be discharged using Islamic accounting. It is this accountability relationship that is of importance in our study. More importantly, the dissemination of accounting information can be regarded as an important mechanism through which major elements of the duty of accountability may be discharged. However, the proponent of the framework did not specified which information should be disclosed in the financial reports. Ihsan & Adnan (2009) argues that the information needed by each stakeholders must be clearly defined and provide such information in the financial reports. Based on the dual accountability, it can be argued that the roles and functions of accounting and financial reporting in discharging accountability would be wider in scope than its conventional charitable institution counterparts (Suhaimi Nahar & Yaacob, 2011).

Accountability in charitable institutions are categorised into four (Cordery & Baskerville, 2005): Fiscal, Process, Program and Priorities. Fiscal accountability refers to the money being spent as agreed and according to appropriate rules. Process accountability refers to the procedures being followed. Program accountability refers to the achievement of the objectives. And lastly, accountability for priorities ensures that the needs of the users are appropriately fulfilled.

Figure 3.2

Accounting, Reporting and Accountability
6.1 FINANCIAL REPORTING ISSUES

Financial reporting, in secular point of view, enables the users to bridge the information asymmetry due to the separation of ownership and control (Suhaimi Nahar & Yaacob, 2011). It also guides the users in making economic, social and environmental decision making (Suhaimi Nahar & Yaacob, 2011). However, the current financial reporting framework of zakat and waqf institutions face several issues.

Mentioned in an Islamic Accounting conference that for every $1 donation made, only $0.4 reaches to the intended beneficiaries. 60% of the donation were lost throughout the process of collection and distribution. The role of financial reporting in strengthening the accountability was not given enough emphasis (Yaacob et al., 2015). This study addresses this issue by emphasizing on the role of financial reports in discharging accountability.

Despite having accounting standards for charitable institutions, existing non-Islamic institutions were found to have significant variations in their financial reports (Yaacob et al., 2015). Having varied financial reports raises comparability issues. It can be argued that varied financial reporting issue is more apparent in the case of zakat and waqf institutions given no accounting standards were enforced on these institutions (Ihsan & Adnan, 2009; Masruki & Shafii, 2013).

Due to the lack of accounting standards for zakat and waqf institutions, some adopted the for-profit accounting framework (Che Azmi & Hanifa, 2015; Suhaimi Nahar & Yaacob, 2011). It can be argued that the application of for-profit standards for zakat and waqf institutions raises several accounting issues. For instance the definition of asset according to IFRS “… future economic benefit …” may not be applicable for zakat and waqf institutions. The nature of zakat and waqf institution is different from that of a profit-oriented institution.

Suhaimi Nahar & Yaacob (2011) found that the accounting framework used by zakat and waqf institutions in Malaysia were self-designed. As a result, the financial reports of these institutions vary in terms of formats. In addition this study found that salaries and utilities expense were not recorded and reflected in the financial statements under the premise that it is subsidized by the government. Moreover, this study concluded that the zakat and waqf institution lacks qualitative disclosures on expenditures and disbursements.

The Malaysian Accounting Standard Board issued a research paper addressing the issue on waqf reporting. Despite Malaysia being considered as one of the most advanced countries in terms of zakat and waqf institutions, the accounting board of Malaysia recognizes the issue on financial reports of zakat and waqf institutions (MASB). The paper is aimed at elevating the discourse on financial reporting of waqf. They claimed that the zakat and waqf institutions in different states have different reporting practices (MASB). It can be argued that there is a need to improve the financial reporting of zakat and waqf institutions (MASB).
6.2 UNDERLYING ASSUMPTIONS

The first issue is on the underlying conceptual framework. As the accounting standards are set for public sector institutions, its focus is providing useful information for decision making of the users (e.g., taxpayers, legislators, creditors, suppliers, media and employees). Similarly, Statement of Recommended Practice for charities (SORP 1.1) described that the primary purpose of the trustees’ annual report is to ensure that the charity is publicly accountable to its stakeholders for the stewardship and management of the funds it holds and to assist the users of the accounts to make economic decisions in relation to the charity. However, the information needed by the users of the financial statements of a zakat and waqf institution is broader in terms of its scope. This can be explained through the dual accountability where the preparer of the financial statements is accountable first to Allah swt and second to the other users. In addition, the users are also interested on the information provided in the financial statements not only in economic decision making but as well as religious decision making.

The concept of profit in zakat and waqf institutions is of little relevance due to its unique nature and structure as compared to the corporate institutions. In the realm of charity institutions, no surplus over revenue (profit) are available for distribution. In addition, the definition of asset which are resources controlled by an entity as a result of past events and from which “future economic benefits” or service potential are expected to flow to the entity may not be applicable in the operations of charitable institutions.

It can also be argued that the bottom figures in the income statement and balance sheet may mislead the users. As for the corporate entities, a higher net income indicates that the company is performing well and a higher net asset indicates the net worth of the company. However, it is not the case for zakat and waqf institutions. A higher net income and net asset may imply that the entity collected a huge amount of donation but failed to distribute it. In this case, the zakat and waqf institution have performed poorly while disclosing a high net income and net asset. Thus, an alternative financial statement format is needed which discloses the relevant information for zakat and waqf institutions.

6.3 FINANCIAL STATEMENT FORMAT

On the financial statement level, each financial statement presented should provide information based on the demands of the users. Given that the nature of zakat and waqf institution is giving more benefits to the public rather than maximising profit, appropriate financial statements should be provided to eliminate any ambiguities. The financial statements of institutions like zakat and waqf institution should conceptually emphasise on accountability rather than profitability (Osman & Hamdan, 2016; SORP, 2014).
For example, the use of conventional Statement of Comprehensive Income (SOCI) to present the financial performance of an entity in a given accounting period (FRS 1) may not align with the nature of zakat and waqf institution. While SORP 2014 suggest the term “Statements of Financial Activities” (SFA) (per SORP 4.1), relevant authority may want to consider other nomenclatures that suits the operation and activities of zakat and waqf institutions. As for SORP, the Statement of Financial Activities (SFA) presents the net inflows or outflows of resources of the institution. Through SFA, the users could analyse all incoming resources based on the activity that generates the particular income. It also provides different performance measurements that can be disclosed in the notes to financial statements that the users could use to evaluate the effectiveness, efficiency and economy of the institution.

Clarity may also be enhanced through lucid information provided in the balance sheet. Empathising the different objective of zakat and waqf institutions, the asset in the balance sheet may also be classified into functional and non-functional assets. Functional assets are assets used for charitable purposes such as Mosques that are used for communal prayers. While non-functional assets are investments of the waqf funds. In relation to this also, the terminology “funds” is appropriately used instead of equity. This, as argued later, ushers us towards the discussion on the suitability of using Fund Accounting as the basis for accounting and reporting for zakat and waqf institutions.

Due to different type of activities, the items in the chart of account may also undergo some adjustment. For example, in the conventional SOCI, the items are presented according to nature of expenditure, i.e., selling expenses, marketing expenses, rental income, wages etc. However, there could be other ways in which the inflows and outflows may be presented. In the case of zakat, the outflows may be presented based on asnaf. It could be presented according to the activities undertaken by zakat and waqf institutions as long as it clarifies the source and application of the zakat and waqf fund received – albeit aligning with accountability objective. As for SORP, it recommends activity basis presentation. For example, the income can be categorised into five per following table.

<table>
<thead>
<tr>
<th>Classification by activity</th>
<th>Brief explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income from donations and legacies,</td>
<td>Refers to the voluntary donations received.</td>
</tr>
<tr>
<td>Income from charitable activities</td>
<td>Refers to the income received through the supply of goods/services under contractual arrangement.</td>
</tr>
<tr>
<td>Income from other trading activities</td>
<td>Refers to the income earned from both trading activities to raise funds for the charity and income from fundraising events.</td>
</tr>
</tbody>
</table>
Investment Income | Refers to the income earned through various investments.
---|---
Other Income | Refers to all other income that are not from the four mentioned categories are lumped here

The presentation based on activities provides some insight into the activities of zakat and waqf institutions as it receives both voluntary and compulsory donations, income from investments both in real and financial assets, and any trading activities. By categorising the income, the users can measure the performance of the institution based on the classification provided.

Similarly, expenditures are also categorised on an activity basis to show how the charity has used its resources to further its charitable aims for public benefits (SORP 4.6). The expenditures can be classified into Expenditure on raising funds (incurred to raise funds for charitable purposes), Expenditure on charitable activities (undertaking activities that further its charitable aims for the benefits of its beneficiaries, Other expenditure, and Gains losses on investment assets.

Following the matching principles in accounting, there is also an option of matching the expenditure to the revenue raise such as classifying them into cost of generating funds, cost of charitable activities and governance cost. Cost of generating funds refers to the commission given to the agent in raising funds. This expenditure account can be matched to the fund raised by zakat and waqf institutions – where possible and permissible. Cost of charitable activities refers to the amount expended to the beneficiaries. Lastly, governance cost refers to the operational costs managing the waqf. By analysing the different categories of expenditure, the users can appropriately match the expenses with the related revenue or income account.

**FUND ACCOUNTING**

Simple commercial entity may not need different type of fund to finance its activities, hence the existence of capital equity account only (on the credit side of BS). The operation of not-for-profit such as zakat and waqf institutions meanwhile may comprise more than one type of funds as a particular fund may serve a designated purpose while another fund may serve a more general purpose. It is also common for a fund to be restricted in its use.

This necessitate the use of fund accounting. In general, the funds can be categorised into Restricted, Unrestricted and Endowment Income. These three can further be classified into several categories depending on the need decided by the governance body such as the board of trustees or even the Islamic principles – as the case for zakat. Due to the possible existence of different type of funds which serves different purpose, columnar presentation may facilitate clearer presentation. The way it is presented may vary. It may be used in the face of the financial statements. Alternatively, its analysis, i.e., the details of each of the fund can be provided in the
notes. For example, SORP para 2.29 suggested that, where the columnar balance sheet is provided or the summary are disclosed in the notes, the balance sheet could be prepared by having separate columns for different funds (i.e., unrestricted, restricted and endowment). It is also possible that further columnar reporting is made within each fund. While the main funds is shown in the main financial statement, the columnar presentation within each fund may be disclosed in the notes. There are other approaches suggested by SORP in columnar reporting such as presenting the funds according to services provided, or projects or programmes undertaken, or by the particular aims or objectives.

Similarly in the SOCI-equivalent statement, SORP para 2.14 mandates that accounting records must separately identify each restricted fund and the income received and expenditure made from each fund. Hence zakat and waqf institutions may learn from these practices and adopt such practices.

6.5 ADDITIONAL DISCLOSURES

While the disclosures narratives mentioned in accounting standards are relevant to zakat and waqf institution, it is argued that the notes to financial statements should be strengthened taking into consideration the nature of zakat and waqf. Improving disclosures practically improves accountability (Che Azmi & Hanifa, 2015). Financial information alone may not discharge the accountability of the trustee/mutawalli. Additional report (Trustees’/Mutawalli’s Report) and disclosures are needed to provide additional information such as structures, governance and management arrangement adopted by the institution. This report contains the fair review of the zakat and waqf institutions structure, objectives, activities and performance – separately or/and collectively. This provides information to the user whether the institution achieved its desired objectives. It also contains the governance and management structure of the institution.

Additional disclosures may pertain to fulfilling indicators such as maqasid al-shariah. It is recommended that a statement in the disclosures indicating that the financial statements were prepared in accordance with the maqasid al-shariah.

In the case of waqf khas and some specific donation, additional disclosure on the intention or condition of the waqif/donor is recommended. For example, AAIOFI SS 33 prescribes that the intention of the waqif must be fulfilled provided that the condition does not violate the Shariah rulings. Thus, it is recommended to disclose the intention of the waqif in the notes to inform the users that it is in accordance with Shariah rulings. In case the institution failed to meet the condition/intention of the donor, the reason of nonfulfillment and the subsequent action taken should be properly disclosed.

Che Azmi and Hanifa (2015) examines the Shariah compliance of the accounting practices of existing zakat and waqf institutions. The study argues that the AAIOFI SS can be used to ensure that the financial reporting practices are shariah compliant.
As an ancillary note, the relevant authorities and the public may want to know the information regarding which bank the zakat and waqf institution is engaged in depositing and other activities. This is to reaffirm the public that its activities including the deposit/investment of cash are free from *riba* (interest) and *gharar* (uncertainty).

### 6.6 ADDRESSING THE USE OF MULTIPLE FUNDS

The complexity of funds use such as the cross-subsidising of a project using fund from different category also deserves attention. For example, a project funded by waqf may be subsidized by other funds such as zakat fund or/and other funds. This requires proper accounting treatment to show the flow of fund and whether a particular fund is allowed to be used for other project or vice versa (i.e., whether such project is allowed to receive assistance/money from another type of fund). Assuming that this is permissible from Islamic perspective, there should be proper and clear recording and reporting of the interfund transaction. A statement similar to Statement of Changes in Equity may be used to address this issue. There should be clear presentation of the transfer between one fund to another. Additional narratives - such as the reason for its occurrence and the time limit accorded for repayment (if applicable) - may be warranted if the statement is insufficient to convey the information to the interested party. This is similarly found in SORP para 2.6 where the unrestricted fund can be used by trustees to support a specific activity or project.

Issues such as the permissibility of employing zakat funds to fund other waqf related activities; the capacity and the authority of the trustee in setting aside a portion of the zakat fund for future project commitments; and the basis of restriction are among relevant issue needing further clarification.

### 7. CONCLUSION

This paper addresses the issue on lack of accounting standards for zakat and waqf institutions by recommending a financial reporting framework underpinned by the dual accountability framework. It is argued that one way of improving transparency and accountability is through accounting (i.e., end product is financial statements) (Ihsan & Adnan, 2009). A sound financial statemented is crucial in the existence of zakat and waqf institutions (Sulaiman et al., 2009). Sulaiman, Adnan, Nor, & Suad (2009) argues that the information provided in the financial statements is an important mechanism on discharging accountability.

This paper tackled some issues on financial reports of *zakat* and *waqf* institutions and provided some recommendations. It is argued that the information needed by the users of the financial statement of a *zakat* and *waqf* institution is broader as compared to its conventional counterpart. Other than the economic decision making usefulness, the users may also be interested on religious aspects such as *Shariah*
issues. This paper recommends alternative financial reporting format such as the columnar reporting and provide additional disclosures to address the information needed by its users.

(Riedl & Srinivasan, 2010) argues that financial statement presentation assists the users to have a better understanding of the information disclosed in the financial statements. Different financial statement presentations influences the users’ judgement (Maines & McDaniel., 2000). For instance disclosing the information on the face of the financial statements or in the footnotes influences the users’ judgement. In addition, Bradshaw et al. (2010) argues that the aggregation and disaggregation of financial information also influences the users’ judgement and decision. The disaggregation of financial information enhances users’ decision usefulness. However, the trade-off between decision usefulness and excessive information complexity must be taken into consideration in deciding the financial presentation format.

(Maines and McDaniel (2000) argues that the professionals and non-professionals users differs, to some extent, on how they acquire and evaluate financial information. The study found that altering financial statement presentations influences the professionals and non-professional on their performance judgement.

BIBLIOGRAPHY


TRACING THE EARLY TOURISM ACTIVITY IN EASTERN INDONESIA

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ABSTRACT

Recently the Indonesian government promotes eastern Indonesia as the alternative of tourist destinations. Historically, organized tourism activities in Indonesia can be traced to the late nineteenth and early twentieth centuries. The activity began to be limited to Java, parts of Sumatra, and Bali. Therefore, the study is only in that region. Not many studies discuss the beginning of tourism activities in eastern Indonesia. This study aims to reveal the beginning of tourism activity in eastern Indonesia at the end of the nineteenth century until the first half of the twentieth century. Besides historical methods consisting of heuristics, criticism, interpretation, and historiography, this study uses geographical approach. The sources used are travelogues, tourist guidebooks, newspapers, and periodicals. The result shows that the beginning of tourism activity in eastern Indonesia has existed since the end of the nineteenth century although when it has not been regulated. It relates to the shipping line of Koninklijke Paketvaart Maatschappij (KPM) in the East. This study concludes that tourism activity in eastern Indonesia has become a concern of Dutch East Indies government. However, its development is constrained by infrastructure and accommodation facilities. The problems which also faced by the Indonesian government today.

Keywords: Colonial period; Eastern Indonesia; History; Tourism activity

1. INTRODUCTION

On 1 January 2016, President of Republic Indonesia, Joko ‘Jokowi’ Widodo witnessed the first sunrise of 2016 at the Waiwo Beach dock in Raja Ampat, West Papua. Wearing a white shirt and sarong without sandals, he sat on the dock and fed the fish below. Seeing the beauty of Raja Ampat, Jokowi said that he wanted more tourist to visit Indonesia (“Jokowi sees new year,” 2016). He uploaded then his photograph on his twitter official account @jokowi with the caption ‘Fajar perdana 2016 di dermaga Waiwo, Raja Ampat, tempat terbaik di dunia untuk snorkeling’ (The first dawn of 2016 at Waiwo dock, Raja Ampat, the best place in the world to snorkel).

On January 2017, Vice President Jusuf Kalla accompanied by Tourism Minister Arief Yahya visited Tana Toraja, South Sulawesi. Kalla’s visit has resulted the government decission to

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choose Tana Toraja as the latest emerging tourism location to be developed. Safari Burhanuddin, Deputy Coordinating Maritime Affairs said that a special team comprising members of various ministries and agencies had been set up to the development of Tana Toraja (“Tana Toraja set to prosper,” 2017; Farida, 2017).

Those two facts show the Indonesian government's efforts nowadays in developing the eastern part of Indonesia as the tourist destination. As we know that eastern part of Indonesia has tremendous potential to become tourist destination. Meanwhile, the Indonesian government has also declared that tourism one of the country’s main sectors to develop and expects to garner US$20 billion in foreign exchange revenue in 2019, double the figure of 2013. To achieve this goal, it eyes 15 million foreign tourist in 2017 and 20 million in 2018 (“Govt to focus,” 2015; “Tourism Minister highlights,” 2017; “In 2017 Indonesia Targets,” 2016). This requires serious effort and gets support from various parties related to tourism activities, especially in eastern Indonesia. The questions that arise is whether the effort has only been done in recent years and when actually the effort to develop tourism in eastern Indonesia began.


According to the sources, such as official archive, guidebook, the organized tourism activities in Indonesia can be traced to the late nineteenth and early twentieth centuries. It was marked by the establishment of the Vereeniging Toeristenverkeer (VTV) -Association of Tourist Traffic in Batavia on 13 April 1908. This association organized tourism activities in colonial Indonesia. However, at the time the activity began to be limited to Java, parts of Sumatra, and Bali. Actually, at the end of the nineteenth century, the beginning of tourism activities in eastern Indonesia had already begun to exist. This study aims to reveal the beginning of tourism activity in the eastern Indonesia at the end of the nineteenth century until the first half of the twentieth century.

2. METHODS

This study uses the historical methods consisting of heuristics, criticism, interpretation, and historiography. The sources used are travelogues, tourist guidebooks, newspapers, periodicals, annual reports of the VTV. These sources are used to trace and reconstruct the situation in the period. Besides the historical methods, this study uses geographical approach. The methods developed by the geography here are used to analyze the history of tourism activity in eastern Indonesia. As stated by Demay (2014) that the geographers have a spatial approach to tourism. The colonial context highlights the spatial impact which defined by studying the impact of tourism on a given area. Geographic analysis helps us to understand the mechanisms for implementing and structuring a colonial territory (Demay, 2014:3). In this study eastern Indonesia in colonial period seen as a colonial territory.
3. RESULTS AND DISCUSSION

3.1. Eastern Indonesia as Travel Destination

In the works of female and male travelogues writers in the middle until the late of the nineteenth century founded eastern Indonesia as the region which visited by travelers. They were mostly naturalists. The islands were the lesser Sunda Islands, Celebes, and the Moluccas which visited by them. Ida Pfeiffer from Austria who traveled to the Netherlands Indies in 1853, visited Celebes (Makassar, Wajo, Manado), the Moluccas (Banda, Amboina, Saparua, Ternate, Paso). Anna Forbes, the wife of Henry O. Forbes, a Scottish naturalist, visited Celebes (Makassar), the lesser Sunda islands (Kupang, Timor, Dili), the Moluccas (Banda, Amboina, Ternate, Paso), and also Papua in 1883. English writer Emily Richings in the early of twentieth century visited Celebes (Makassar, Gorontalo, Tondano, Minahasa), the Moluccas (Ternate, Bacan, Buru, Amboina).

The male travelers, such as British naturalist A.R.Wallace in the period 1854-1862 visited Borneo, Celebes (Makassar, Manado), the lesser Sunda islands (Bali, Lombok, Timor), the Moluccas (Ternate, Jailolo, Bacan, Seram, Buru), Papua. Albert Smith Bickmore, an American naturalist traveled in 1865 to the Lesser Sunda Islands (Bali, Kupang, Sumbawa, Dili), the Moluccas (Hitu, Amboina, Seram, Banda, Buru, Ternate, Tidore), Celebes (Makassar, Tondano, Manado, Buton). Henry O. Forbes, Scottish naturalist visited in 1883 eastern Indonesia accompanied by his wife, Anna Forbes. At the time they could not yet be mentioned as tourists because the organized tourism activities did not yet exist as well as the requirements of the tourism activities, such as the availability of tourist guidebook, accommodations, tourist attractions. Meanwhile, eastern Indonesia during the nineteenth century was still covered which called buitenbezittingen (outer possessions) area so that travelers needed a special permit to enter the area. However, the places they visited and listed in their travelogues were important information because later it founded in the guidebooks.

In 1896 the KPM (Koninklijke Pakketvaart Maatschappij)- the Dutch shipping company published the guidebook Reisgids voor Nederlandsch-Indië in Dutch. Therefore the cities listed in the guidebook were related to the KPM shipping lines in Sumatra, Java, Celebes, Borneo, the Moluccas, and Papua. They asked two authors to write the guidebook, namely J.F. Van Bemmelen, a teacher at the Willem III Gymnasium- high school in Batavia and G.B.Hooyer, a retired Dutch-Indies army with the rank of Lieutenant-Colonel. In 1897 published the Guide to the East Indies the English translation of the guidebook. The eastern region was divided into the route to Celebes and the Moluccas. For the route to Celebes, departed from Surabaya, Makassar, Pare-Pare, Mandar, Palu, Toli-Toli, Buol, Minahasa-Amurang, Manado, and Gorontalo (Bemmelen & Hooyer, 1897: 128-153). The route to the Moluccas, through Ternate, Tidore, Bacan, Buru, Ambon, Banda, Banda Lontar, Banda-Neira (Bemmelen & Hooyer, 1897: 156-178). At the time Bali was still not offered to visit. The information existed only in the conclusion. It stated that ‘at Bali we can go and study the Buddhistic [sic] temples and institution, and, in the eastern parts of Archipelago, the various form of heathenism’ (Bemmelen & Hooyer, 1897: 180). In fact, in Bali, there are Balinese Hindu temples, not Buddhistic temples. The using of ‘heathenism’ word (translated from heidendom in Dutch) in that period referred to people and culture in eastern Indonesia. It proves that in the period eastern Indonesia as still closed area and not much visited.
In general, the information provided by the KPM’s guidebook directs to the eastern archipelago. It stated that the area:

...is the most interesting, from an ethnographical, botanical, and zoological point of view, and will prove most attractive to lovers of what is strange, unknown, and wild. In the northern and western part we find more traces of civilization and culture, but also richness of natural scenery, geological and botanical attractions, which characterize the visit to these isles as one of the most agreeable and instructive, that can be paid to tropical zones. (...) In the north-western part, more particularly, is greater safety and peace to be found than in the most civilized kingdom of Europe (Bemmelen & Hooyer, 1897: 129).

Objects in eastern Indonesia which informed at the time, such as towns (Makassar, Manado, Gorontalo, Ambon, Ternate), forts (Fort Rotterdam-Makassar, Fort Amsterdam-Manado, Fort Terloko-Ternate, Fort Victoria-Ambon, Fort Oranje Nassau-Banda, Fort Belgica-Banda Neira, Fort Barneveld-Bacan), palace (Goa-Makassar), landscapes, such as waterfalls (Maros, Tonsea), lakes (Tondano, Limboto), volcanos (Lompobatang, Lokon, Klabat, Dua Saudara, Batu Angus, Gunung Api, Banda Lontar), warm spring (Ajer Panas), and off course the beautiful sea view. These objects were also found in the travelogues from the nineteenth century. As an example, Ida Pfeiffer in the nineteenth century visited forts in Makassar and in Ambon (Pfeiffer, 1856:211, 215)

There was also the advice in the KPM’s guidebook to tourist to enjoy the sea trip in the Moluccas.

The sea-trip [from Ternate to Tidore] there and back is the pleasantest part of the excursion. The view of the two islands, and the receding coast of Halmahera, rising as it does round the light-blue sea, is indeed magnificent (Bemmelen & Hooyer, 1897:163).

According to the KPM’s guidebook, besides enjoying the sea view, the tourist could also enjoy the sea gardens. In the guidebook founded that:

Sea gardens – an excursion through the bay to the so-called Zeetuinen (sea gardens) is very interesting, as they abound in beatiful scenery. These gardens are coral-reefs, which, in the still, deep waters of the bay, protected on all sides (Bemmelen & Hooyer, 1897: 169).

Then there was advice the right time when the tourist can enjoy the sea garden: ‘The visit should be made early in the morning, and when there is a little wind as possible’ (Bemmelen & Hooyer, 1897: 170).

The beauty of sea garden in the Maluku Islands was previously recorded in the travelogue. Anna Forbes and Emily Richings expressed their experience in their travelogues when they saw the beauty of the sea garden. Forbes departed in the morning to see the sea garden. Then Forbes quoted a statement from the previous travelogue writer about the sea garden that: ‘no description can do justice to its surpassing beauty and interest: for once, the reality exceeded the most glowing accounts I had ever read the wonders of the coral sea’ (Forbes, 1887:71). This experience of visiting the sea garden also revealed by Richings who also departed in the morning. She described the beauty of the sea garden:

Coral trees, pink and white, gold and green, orange and red, wave interlacing branches of lace-like texture and varying form, above the blue waterways which divide the tremulous masses of rainbowtinted foliage (Richings, 1909:180)
Later in 1932 Oscar Fabrés (1894-1961), a French journalist and caricaturist visited the Netherlands Indies, especially eastern Indonesia. He also visited the sea garden and he described his experience on his article and caricature in a Batavian newspaper (*Het Nieuws van den dag voor Nederlandsch Indië*, 24 March 1933).

Besides natural objects, cultural object was also offered and advised in the KPM’s guidebook. For example, in Tidore the tourist by the intermediation of the Resident of Ternate, had an opportunity of being treated to a performance of the old-fashioned war-dance the Cakalele (Bemmelen & Hooyer, 1897:164). The experience of seeing this dance were experienced by Ida Pfeiffer and Anna Forbes (Pfeiffer, 1856:238; Forbes, 1887:105). Pfeiffer wrote:

The other dance, the Tjakalele, dates from the Portuguese time, though it has undergone some alterations. It is performed, along with a kind of prelude, by ten dancers, and is pretty enough to be compared with some of our best ballet-dances. The costume of performers consisted of orange-colored trousers and caftans, the latter open at the four sides, colored ribbons and scarfs, and three-cornered felt hats, with the white plumes. Each dancer held a wooden sword in his hand and had a colored silk handkerchief fastened to each arm (Pfeiffer, 1856: 238).

Cakalele is the traditional war dance from the Maluku Islands. It can be found in the Haruku island and in varied form in some other places, such as Banda Neira. The Cakalele in Haruku island is danced by about 30 men and women. Outside Haruku island, in Banda Neira the Cakalele is danced only by the all-man ensemble of five dancers (Ministry of Education and Culture Republic of Indonesia, 2012: 308-309).

The nineteenth-century KPM’s guidebook also offered the accommodation and transportation. According to Wallace when he visited Makassar in 1856, he founded no any hotels (Wallace, 1869:219). In eastern Indonesia, at the time there were not the good European hotel. Men founded hotels in Makassar, Tondano, Manado. This situation did not change until the early of the twentieth century. C.D.Mackellar, a Scotish naturalist who visited eastern Indonesia in 1900 commented the hotel in Makassar which was very bad (Mackellar, 1912: 234). Arthur Walcott, an American traveler who visited Manado in 190 mentioned the hotel where he stayed as our primitive little hotel (Walcott, 1914: 123). When he was in Ternate, he wrote that there was no regular hotel. Therefore, in the KPM’s guidebook advised one to sleep aboard ship or in *pesanggrahan*, a government resthouse (Bemmelen & Hooyer, 1897: 135; Walcott, 1914: 148).

The government resthouse had minimal facilities. Previously one had to get permission from the local authorities. For transportation at the time, besides steamboat of the KPM, used the horse-drawn carriage, horse, and boat. Interestingly, travelers were offered that they could buy souvenirs. As stated in the KPM’s guidebook that in Banda: ‘At the Arabian firm of Baadilla brothers, we have the opportunity for buying all kinds of skins of birds-of-paradise, as well as crested pigeons (Gura) and Nicobar-pigeons’ (Bemmelen & Hooyer, 1897: 178).

### 3.2. Eastern Indonesia as Tourist Destination

In 1908 established the *Vereeniging Toeristenverkeer* (VTV) -Association of Tourist Traffic in Batavia on 13 April 1908 that based on government decision number 9. It contained the goals of the VTV. One of the goals was tourism promotion effort in the Dutch East Indies,
specifically the promotion of travel and tourism industry on the island of Java and other islands of the Dutch East Indies, in favor of the residents and foreigners, in a broad sense (Government Besluit, 13 April 1908, No.9, ANRI, Algemene Secretarie 1908-1939).

In the early period, the tourism promotion focused on Java and some areas of Sumatra. Java was a territory ruled almost entirely by the Dutch East Indies government in the early nineteenth century, since their arrival in the seventeenth century. This region was the center of Dutch power so that this region was considered important compared to other areas outside Java which called buitenbezittingen (outer possessions) as mentioned before, except Bangka and Banda. The outer possessions areas were Sumatra, Borneo, and Celebes (Kleintjes, 1927:64-65). The Dutch East Indies government had not yet controlled the outer possessions area completely so that it was almost impossible for tourism activities. This is the reason why they focused on Java for their tourism promotion.

In the end of the nineteenth century according to the KPM’s guidebook, Bali was still not offered as destination. The situation later changed. In 1914 Bali was conquered and deemed safe enough, the Dutch East Indies government withdrew its troops there and replaced the role of the army with the police. Bali at the time could already be reached by ship from Surabaya. From the port of Buleleng, the traveler could rent the horse or horse-drawn carriages for transportation (Picard, 2006:31). In 1914 the KPM published the tourism promotion brochure on Bali in English with the text as follows: ‘Bali, You leave this island with a sight of regret and as long as you live you can never forget this, Garden of Eden’ (Vickers, 1989: 91-92). The offering of Bali as one of the destinations that worth visiting by tourists was increasingly apparent with the publication of Illustrated tourist guide to East Java, Bali and Lombok (1914) published by the VTV. In the introduction of the guidebook explained that for tourists who included Bali and Lombok in their itinerary, it took at least two to three weeks (Officieel Toeristenbureau voor Nederlandsch Indie, 1914: 10).

In the same year (1914) published in Amsterdam Bali en Lombok. Reisgids voor Toeristen by Dr. A.H.Pareau. The purpose of this guidebook as delivered by the author because of the lack of recognition of Bali among tourists who only knew Java and also his dissatisfaction with the information about Bali in the KPM’s guidebook in 1896 (Pareau, 1914: 7-8). It is quite clear that the targeted tourists who visited Bali or Lombok the tourists who have a lot of time. As stated in the VTV’s guidebooks in 1914:

That is why a visit to these islands cannot be recommended to a Tourist who in the first place wants comfort, but those who do not mind roughing it a little, will never regret having made this trip, so many interesting and beautiful things will be encountered there (Officieel Toeristenbureau voor Nederlandsch Indië, 1914:10-12).

However, although in Bali and Lombok, according to the guidebook already available good road infrastructure, transportation and accommodation on the islands were still not adequate. Bali and Lombok offered only to tourists who liked adventure. While for tourists were concerned with convenience, a visit to the two islands was not recommended.

There are two options offered for tourists who intended to visit Bali. The first option for those who did not have much time (at least two weeks) was given suggestions to dock at Benoa.
Then they crossed the island of Bali to the north through Denpasar, Gianyar, Bangli, and Kintamani. The second option for those who had a lot of time was recommended to land on the north coast (Buleleng). Then they crossed the Munduk, the area with the lake in the mountains, Tabanan then to Denpasar (Officieel Toeristenbureau voor Nederlandsch Indië, 1914:125).

Meanwhile, according to the guidebook, the tourist who intended to visit the Lombok island was advised to use a boat from Surabaya to Benoa and then to dock in Ampenan. From Ampenan they could travel on the island. From Ampenan or Mataram they could travel to Narmada. For tourists who intended to stay longer, suggested from Mataram they crossed the island to Selong and back through Praja. In this southern region, tourists were treated to beautiful scenery. It was also possible to climb Mount Rinjani. However, this was not recommended because it required adequate preparation and equipment. The most important thing was before climbing the tourists must get permission from the Mataram controller (Officieel Toeristenbureau voor Nederlandsch Indië, 1914:153-158).

In this guidebook, there was no information about the history of Bali or its people at that time. There was also no description of the beauty of the island and its inhabitants. Information was given to tourists precisely the inconvenience and difficulties that would be encountered on their trip. Even tourists were warned not to visit certain areas that were unfriendly and less attractive.

Another effort that related to promotion activity was producing the documentary film. In 1918 American film company Burton Holmes Travelogues Co who owned by Elias Burton Holmes traveled in Java and Bali to take pictures on both islands (Vereeniging Toeristenverkeer, 1919:8). This was a good effort to promote Bali. However, at the time Java was still the favorite destination.

In the early of 1920's when Edward A. Powell, an American journalist visited Bali, he faced the fact that there are no hotels in Bali. He got the information from the Resident of Buleleng. However, as written by Powell, the Resident would help him to contact the Assistant Resident of Denpasar to provide a room in pasanggrahan, then the controller of Klungkung to arrange some native dances (Powell, 1922:147). Unfortunately, Powell had a bad experience with the room in pasanggrahan. He mentioned so many forms of animal that he founded, such as cockroaches, spiders, centipedes, ants, beetles on his bedroom, flying fox, a family of lizard (cicak), and mosquitos (Powell, 1922:157). Powell’s experience strengthens the statement that at the time Bali offered only to tourists who liked adventure.

Since more tourist came to the VTV office and asked the information about the buitenbezittingen (outer possessions) areas, in 1926 the VTV opened the information department for outer possessions (Officiele Vereeniging voor Toeristenverkeer, 1927:4-5). The increasing number of tourists who came to Bali had caused the VTV to design special arrangements. In 1926 there was an agreement between the VTV represented by N.A. Wymenga with L.J.J. Caron, Resident of Bali and Lombok on cooperation between the two sides. Then in 1927 established the VTV branch office in the former pavilion Singaraja museum. Meanwhile, for the transportation was arranged a combination between traveling with car and KPM's ships. For accommodation was attempted to use pasanggrahan in cooperation with the government, especially for the tourists (Officiele Vereeniging voor Toeristenverkeer, 1928:4-5).
The KPM directors who saw the lack of accommodation in Bali decided to open a hotel in Denpasar which was expected after the discussion with the local government, the hotel could be opened in mid-1928. Hotel Bali opened to replace pasanggrahan Denpasar, right where Puputan occurred in 1906 (Officiele Vereeniging voor Toeristenverkeer, 1928:6). From the annual reports of the VTV from 1926-1930, there was an increase in the number of tourists who came to Bali. In 1926 was 445 tourists, in 1927 was 680 tourists, in 1928 was 927 tourists, in 1929 was 1428 tourists, and in 1930 was 1555 tourists. They came from the Netherlands, America, Britain, Australia, Germany (Officiele Vereeniging voor Toeristenverkeer 1929-1930; Indisch Verslag 1931).

The other islands were the Moluccas. In 1925 the KPM published guidebook Toeristenreis Naar de Molukken (Tourist Trip to the Moluccas). The publication of this book related to the first tourist trip to the Moluccas by steamboat S.S. Plancius in May 1924. The trip was for 17 days for departing from Batavia and 14,5 days for departing from Surabaya. It cost of 500-600 guilders with an additional cost for some sight seeing (Het Nieuws van den dag voor Nederlandsch Indië, 23 Februari 1924; Vereeniging Toeristenverkeer, 1925:4).

It is also clear that the tourist’s target of Toeristenreis Naar de Molukken was the Dutch, as well as lived in the Dutch East Indies and in the Netherlands. Although the title of the guidebook was a trip to the Moluccas, this guidebook was like a tourist trip with the Plancius ship in 1924, which traveled eastward to Bali, Lombok, Celebes, Borneo. As a starting point was Surabaya that could be reached from Sumatra or Singapore (Koninklijke Pakketvaart Maatschappij, 1925: 21).

The trip to the Moluccas would surely pass through the KPM route in the eastern region. Objects offered in these areas was cultural objects in the form of a castle building of the VOC (Vereenigde Oost Indische Compagnie)- the United East India Company- relics, and Portuguese relics. In Tidore there were the fortress of Oranje and Terlogo, the fort Barneveld in Bacan, the fort Leitimor (Victoria), the fort of Nassau and Belgica in Ambon, and ruins the fort of Hollandia in Banda. The museum in Ternate (the sultan's Ternate palace). Then the natural objects offered such as volcanoes (Puncak Ternate, Gunung Api, Banda) natural grotto (Batu Lubang in Ambon), lake (Duma Lake), sea gardens (Banda and Ambon sea garden). For example Puncak Ternate, Duma Lake in Halmahera, and Banda and Amob sea gardens (Koninklijke Pakketvaart Maatschappij, 1925: 71-110). In the end of the 1927 and early of 1929 the Moluccas tour that organized by the KPM became popular travel, especially in America. In 1930 the tour arranged by the KPM in cooperation with American Express Company which chartered the world cruiser ship ‘Belgenland’ (Officiele Vereeniging voor Toeristenverkeer 1929: 6-7; Officiele Vereeniging voor Toeristenverkeer 1930: 6).

Though the trip to eastern Archipelago region already existed in the late of the nineteenth century (as part of the KPM’s route) and also included in travelogues, there not many people knew the beauty of the region. The areas that were often offered were Java, Sumatra, and Bali. Therefore it was necessary to offer other areas. One of them was the Moluccas with the objectives as stated in the guidebook as the appropriate means and pleasant distraction of daily work and rest after tense activities. In addition, the publication of this guidebook had other purposes. The objective was to reward Mooi Indië (Beautiful Indies) for the idea of zee-toerisme (marine tourism) which as the unknown idea in the Dutch East Indies (Koninklijke Pakketvaart Maatschappij, 1925: 4).
According to the annual report of the VTV in 1928, the tourism activity in Celebes, especially in South Celebes in 1920’s was in its infancy. A potential tourism destination in South Celebes was as stated in the annual report: ‘een mysterieus waas van onbekendheid gehulde bergland der Toradjas’ (a mysterious haze of unknown mountainous land of Toradjas) (Officiele Vereeniging voor Toeristenverkeer, 1929:6). In 1929 Makassar for the first time visited by the big world cruise ship ‘M.S.Stela Polaris’ owned by Bergen Line from Norway. The visit was success (Officiele Vereeniging voor Toeristenverkeer, 1930:6, 16). Unfortunately, there was no information about the tourist activity in Makassar and its vicinity during the visit of the cruise ship.

In 1937 the Director Nitour (Netherland Indies Tour) in Batavia, L.C. Admiraal opened opportunities for foreign tourists to visit South Celebes. One of the areas in South Celebes which worth to visit was Toraja. The Toraja region was very different from Java, Bali, and Sumatra. According to Admiraal that:

The Toradja area is something special; it is an area that differs from the particular structure of their mountains differently from other areas in Indies which are visited by tourists, while the resident still looks quite ‘wild’ (Sumatra Post, 15 Juni 1938).

Until the 1930’s in South Celebes still faced the problem with the accommodation so that the area was still inadequate for foreign tourists. Pasanggrahan (guest houses) in South Celebes were not suitable for tourists. However, promotion to this area keeps being done. In 1930 the VTV published the special number of Celebes in Tourism. A monthly bulletin of information relative to travel in the Dutch East Indies volume V number 6.

4. CONCLUSION

From the sources shows that the beginning of tourism activity in eastern Indonesia has existed since the end of the nineteenth century although when it has not been regulated. The area and objects which visited founded in travelogues in the nineteenth century. It refers to the shipping line of Koninklijke Paketvaart Maatschappij (KPM) in the eastern Indonesia with Makassar in South Celebes as the gateway.

The Dutch East Indies’ government through the KPM at the end of the nineteenth century and later the VTV in the early of the twentieth century tried to promote the region with publishing material promotion, such as the tourist guidebooks, magazines, documentary film. Although there were no good infrastructure, accommodation facilities, and transportation, the government through the VTV keep promote the tourism in the area. It shows that the tourism activity in eastern Indonesia had become a concern of the Dutch East Indies’ government.

If we look at the current situation, similar problem in eastern Indonesia at the time are also faced by the government today. Therefore the government of Republic Indonesia has to prepare all the means that support the tourism activity, such as the infrastructure, accommodation, attraction. All ministries and agencies also should support tourism activities. This effort is not only done by the government but all parties who have interests in tourism activity. They could be from academics, business people, media, and community. They must work together, synergize to achieve the goals. The most important thing is how to keep it all sustainable and improve the quality of service.
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SUBJECTIVITY OF WOMEN’S BODY AS A RESISTANCE TO THE DOMINATION OF PATRIARCHY IN NOVEL VEGETARIAN BY HAN KANG

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ABSTRACT

Women’s body cannot be separated from the bind of objectivism and social construction discourse. A novel *Vegetarian* by Han Kang shows the discourse of woman’s body through “madness” behaviour of the female main character. This research aims to disclose the meaning of that “madness” depicted in the novel and her strategy to resist from the patriarchal domination. Through the application of postmodern feminism approach by Luce Irigaray, the finding of this research regarding the resistance from the female main character is explained in two points. First is by the suicide attempts showing her authority over her own body. Second is by her decision to be a vegetarian that indicated her attempt to get emancipated from any kind of violence, as well as to break the ‘to dominate-be dominated’ relations. Based on the results of this research, the conclusion is the “madness” behaviour of the female main character in this novel can be interpreted as her attempt to get subjectivity of woman’s body, that she can be the absolute “owner” of her body and to liberate herself from any social constructions that bind it.

*Keywords*: Domination; Emancipation; Patriarchy; and Women’s body

1. INTRODUCTION

1.1 Background of the Study

Korean literature generally has a specific characteristic which different from other literatures in the world. The substance of literary work in Korean literature is more important than style of writing and aesthetic form. One of the unique characteristic in Korean literature that makes it special is an element from the concept of “Han” which related with Korean culture. “Han” can be defined as an element of suffering repeated until on the climax of sorrow, but in the other hand, it describes the force to survive in that suffering. In period of Japan colonialism, Korean literature continually expressed the reality in Korean society. In the late 19th centuries and coming the 20th centuries, the form of aesthetic in Korean literature received many influence of Europe literature (Lee Tae-dong, 1996). The influence of Europe literature had been making innovation in Korean literature which was known had tendency to be realist. One of the Korean novels which successfully step outside from the realist tendency and become an anomaly in Korean literature is a novel *Ch’aesikjuuija* by Han Kang which had been translated in English as *Vegetarian*.

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On May 16th, 2016, novel *Vegetarian*—in an English edition translation by Deborah Smith—got an award as a winner of Man Booker International Prize in category of the best novel translation by eliminated many novelists in the world such as Orhan Pamuk, Kenzaburo Oe, and the other names. That achievement made this novel become well recognised in the international world, including in Indonesia. The title of *Vegetarian* is not automatically telling us about only a vegetarian lifestyle, in contrast, it reflects about many problems of women violence.

*Vegetarian* narrates the story of the main character named Young Hye who decided to be a vegetarian after she had nightmares. In her dream, Young Hye had some terror and walked away in the midst of the drop of blood that derived from the meat which was hanged along in the darkened hallway. The nightmares continuously haunted Young Hye and made her became insomnia because she felt fear if that nightmare could come back. In her dream, she saw the scene of assassination but she did not know who was the killer and being killed. Young Hye’s husband and her family, especially her father, assumed that her behaviour and her reason to become a vegetarian are irrational. Young Hye’s decision to become a vegetarian is the beginning of conflicts which ‘open’ the relation of female and male characters in this novel. This relation reflects the domination of men to women in it.

The novel is divided in three chapter and each chapter uses different point of view—Young Hye’s husband, Young Hye’s brother in law, and Young Hye’s sister—to voice Young Hye’s behaviour. As the main character, Young Hye is not given ‘space’ to voice her own perspective. Based on its structure, this novel emphasises in the domination to the female main character. The main character in this novel is a woman who is considered to be ‘strange’—and even be mad—by her husband and some people around her. Young Hye’s ‘madness’ can be seen from the way she treats her body start from when she decides to be a vegetarian until when she refuses to eat anything. However, that ‘madness’ behaviour lead to a strategy for achieving independence as a woman and liberate herself from men’s domination.

The problem of this research is based on two cases. First, how does the form of the men characters domination to the main woman character in this novel? Second, how does the main woman character’s strategy to liberate from the patriarchal domination? Based on those problems, this research applies postmodern feminism which approached by Luce Irigaray.

### 1.2 Theoretical Framework: Postmodern Feminism by Luce Irigaray

Theory of postmodern feminism essentially wants to remove the binary opposition between masculine and feminine, sex and gender, men and women. The feminists postmodern found a way to break the conceptual limits that prevented women defined themselves through their own language (Gatens, 1992 and Tong, 2009).

According to Cixous and Irigaray theory, women’s body is a woman’s language. *L’écriture Féminine* which roughly can be defined as ‘write’ women’s body is a part of attempt to create women’s language (Ida, 2015, p. 48). Body, in this case, can be used as a power to be invested to many ways. Irigaray offered a strategy for women to deconstruct metaphysical symbol which charged over their body by create their own ‘language’ (Irigaray, 1985 in Ida, 2015).

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Women’s subjectivity in postmodern feminist concept can be built from their bodies. The women can escape from their limitation if they position themselves as a subject with their bodies. According to Irigaray, the essential femininity had been repressed by patriarchy culture. Therefore, the femininity is valued by masculine’s parameter (feminine phallic) (Weedon, 1987 in Fitria, 2009, p. 17). Irigaray wishes that every woman will be able to liberate herself from the concept of feminine phallic to build the subjectivity of women’s body (Tong, 2009, p. 296).

The concept of women’s subjectivity which demonstrates the power over their body is used to reveal the meaning of the main woman character’s behaviour in novel Vegetarian. However, before revealing the meaning of it, the domination of men characters which stimulates resistance attempt from the main woman character must be identified.

2. METHODS

This research uses postmodern feminism theory which aims to discover the meaning behind the ‘madness’ of the main female character who desires to jump out from the patriarchy domination. This research is done through two steps. The first step is identifying the forms of the patriarchy domination which did by the main woman character’s husband and her father. The second step is identifying the forms of the reciprocal which did by the main woman character. The forms of reciprocal can be found from investigating the main female character’s peculiar actions from the focalization of her husband and her elder sister. Through those steps, the strategy of the main woman character to step out from the patriarchy domination in this novel can be revealed.

3. RESULTS AND DISCUSSION

3.1 Domination of Men: Objectification and Violence to Woman in Novel Vegetarian

Objectification can be defined from how men positioning and seeing women as an object. In other words, the subject who has authority to evaluate is a man. First chapter in this novel is opened by narration from Young Hye’s husband. He describes about his impression to Young Hye in the first meeting and Young Hye is described as an ordinary woman.

Before my wife turned vegetarian, I’d always thought of her as completely unremarkable in every way. To be frank, the first time I meet her I wasn’t even attracted to her. Middling height; bobbed hair neither long nor short; jaundiced, sickly-looking skin; somewhat prominent cheekbones; her timid, sallow aspect told me all I needed to know.

[...]

The passive personality of this woman in whom I could detect neither freshness nor charm, or anything especially refined, suited me down to the ground. There was no need to affect intellectual leanings in order to win her over, or to worry that she might be comparing me to the preening men who pose in fashion catalogues (Han Kang, 2017, p. 3).

Young Hye’s husband in quotations above is giving objectification to Young Hye. It can be seen from his manner to rate the types of women’s body. Based on the quotations above,
perception or ideal standard of women’s beauty is measured by men. Women’s body shapes and ideal face characteristic are always referred from men’s judgement. In other words, women cannot define their own beauty standard.

However, despite Young Hye’s body is not described as a kind of beautiful woman based on her husband’s objectification, her eyelid and prominent cheekbones show ‘originality’ face of Korean women. If it is associated with the context of plastics surgery which increasingly attracted by women in Korea, it shows that Young Hye is not referring to the standard of Korean women’s beauty which often performs plastic surgery to enlarge their eyelids and pointed their cheekbones and jaws. Hence, Young Hye character’s description who maintains her body shape is an indication of Young Hye’s independence in possessing her own body. The description indicates that she does not care with her appearance which is the opposite of ideal standard of women’s beauty in men’s perspective. Nevertheless, it shows Young Hye’s subjectivity does not stuck in construction of ideal body which is formed and discoursed by domination of masculine appraisal.

Furthermore, based on the dictions of Young Hye’s husband, his appraisal reflects inferior judgment to Young Hye. His decision to marry Young Hye was precisely because of Young Hye’s appearance demands him to do nothing extraordinary. In this case, the husband’s character shows his objectification by positioning his wife as an object and build hierarchy between them. He assumes as a subject that his position is higher than his wife and he does not need to feel anxious of other men as his competitors. Based on his appraisal, he thinks that there is no man who ‘interested’ in his wife. It shows that there is hierarchical relation between figure of husband and Young Hye as the result of the culture of patriarchy. This exposes that appraisal of women is based on physical characteristics without minding nonphysical things such as personality of women.

Domination of men can also be found from the technique of narrative which distinguishes the ‘voice’ the husband character and ‘voice’ Young Hye. Before Young Hye decides to become a vegetarian, the ‘voice’ of Young Hye is presented in the form of memories and cannot be heard by the husband figure.

_The morning before I had the dream, I was mincing frozen meat—remember? You got angry._

“Damn it, what the hell are you doing squirming like that? You’ve never been squeamish before.’

_If you knew how hard I’ve always worked to keep my nerves in check. Other people just get a bit flustered, but for me everything gets confused, speeds up. Quick, quicker. [...] My hand, the chopping board, the meat, and then the knife, slicing cold into my finger._

[...]

_Later that day, when you sat down to a meal of bulgogi, you spat out the second mouthful and picked out something glittering._

“What the hell is this?” you yelled. “A chip off the knife?”

_I gaze vacantly at your distorted face as you raged._
“Just think what would have happened if I’d swallowed it! I was this close to dying!” (Han Kang, 2017, p. 19).

Quotations above show that the husband character often spells rude words and it makes Young Hye precisely easily makes mistakes. Expression of Young Hye’s feeling which are manifested in the conscience shows the position of women as others, borrowing the term from Beauvoir, in its relatives with men. As a woman and a wife, the figure of Young Hye is not given broader space to voice loudly to convey her point of view. In its relation with the husband character, women placed as ‘the other’ and their voices does not need to be heard by men. The relation of Young Hye and her husband can be seen that it still refers to the culture of patriarchy, when men is given greater space to voice and determine, while women have to voice something in limited space and placed as an object of determination. Thus, the domination of figure husband to Young Hye is can be seen in the following quotation.

I sometimes told myself that, even though the woman I was living with was a little odd, nothing particularly bad would come of it. I thought I could get by perfectly well just thinking of her as a stranger, or no, as a sister, or even a maid, someone who puts food on the table and keeps the house in good order. But, it was no easy thing for a man in the prime of his life, for whom married life had always gone entirely without a hitch, to have his physical needs go unsatisfied for such a long period of time. So yes, one night when I returned home late [...] I grabbed hold of my wife and pushed her to the floor. Pinning down her struggling arms and tugging off her trousers, [...] She put up a surprisingly strong resistance and, spitting out vulgar curses all the while, it took me three attempts before I managed to insert myself successfully (Han Kang, 2017, p.30).

When Young Hye decides to become a vegetarian, she turns into a quiet figure and rarely speaks to her husband. She becomes cold and always ignores her husband’s desire to have sexual intercourse as to Young Hye, her husband left the smell of meat which she hates the most. Young Hye’s changes then considered as a peculiar act by her husband and because of it, she becomes like a stranger to her husband. However, in her husband’s perspective, it does not impact something enormous since he only sees Young Hye only as his maid. This confirms that the role of women only limited in domestic space. This is strengthen by the narration from her husband which shows that he considers his wife only as an assistant households and he still takes benefits from the role of women even though her wife has the ability to liberate herself. The system of patriarchy says that men are those who have power and authorities. In other words, hierarchy is because the highest position is owned by men. This hierarchy is successfully separating two poles namely the powerful and the weak. Men are considered stronger than women therefore they are able to carry power. Hence, men get privileges as the subject.

The mention of ‘sister’ affirms that the power is owned by the husband figure. It also shows the boundary and hierarchy between their relations. Behaviour of Young Hye’s husband whose obtrudes to his wife shows that the domination of men produces violence against women. This refers to community system of patriarchy which places women as the weak while men as the strong. Privileges of men as the subject build superiority over women. This reflects in previous excerpts which show that the husband character does not really care with Young Hye’s refusal.
However, as a man, actually he does not want his superiority depraves because of it. Even though Young Hye has psychological reasons related to her peculiar behaviour regarding the odour of meat which can be smelled from her husband’s body, her husband does not really want to understand it. Thus, figure of husband puts Young Hye as a sexual object with several domestic duties, not as a partner who has equal position.

The domination of men is not only shown through her husband’s figure, but also her father. Young Hye’s father is described as a man who has abusive behaviour. It can be seen in the following quotation.

“What kind of talk is that?” my father-in-law yelled. “Grab her arms, quickly. You too, Mr. Cheong.”

[...]

“Mm-mm... mm!”

My father-in-law mashed the pork to a pulp on my wife’s lips as she struggled in agony. Though he parted her lips with his strong fingers, he could do nothing about her clenched teeth.

Eventually he flew into a passion again, and struck her in the face once more (Han Kang, 2017, p. 39—40).

The dialogue above is when the Young Hye’s family hold gratitude banquet for her sister’s new house. In that banquet, there are various menu of meat to serve. In Korean tradition, meat is a special menu (especially beef) to serve in every occasion (Latifah, 2017). By refusing to eat it, Young Hye is considered to not respecting the entire occasion. This sparks indignant of her father and causes her father’s temper to do no good to Young Hye. As the head of the household, father’s figure has ‘superpower’ since in the culture of patriarchy the absolute authority is given to the father. Patriarchy itself means ‘power of father’, as expressed by Rich (1976) in Bem (1993, p.40), “Patriarchy is the power of the: a familia-social the fathers, ideological, ... the female is everywhere subsumed under the male”. Father’s figure has the highest position and holds power, and even higher than Young Hye’s husband. This can be noted that Young Hye’s husband is unable to defence that violence even with the law.

The violence which done by Young Hye’s father to Young Hye shows that dominance of father is the absolute power to treat her daughter in all the way he wants. Actually, a few days before the banquet, Young Hye says that she turns to a vegetarian but her explanation is unacceptable and seems irrational to her father and her family. Opposition of Young Hye’s choice considered her as ‘the other’ in her family because of her decision to be a vegetarian. It is reflecting how domination of the majority considers ‘different’ or ‘strange’ in addressing the minority who have different perspective. Young Hye’s decision to become a vegetarian in her family who treasure to eat meat makes her as ‘target’ of violence. It started even since Young Hye’s childhood and represents in quotation below.

Yeong-hye had been the only victim of their father’s beatings. Such violence wouldn’t have bothered their brother Yeong-ho so much, a boy who went around doling out his own rough justice to the village children. As the eldest daughter, In-hye had been the one who took over from their exhausted mother and made a broth for her father to wash the liquor down, and so he’d always taken a certain care in his dealings with her. Only Yeong-hye, docile and naive, had been unable to deflect their father’s temper or put up any form of resistance. Instead, she
had merely absorbed all her suffering inside her, deep into the marrow of her bones (Han Kang, 2017, p. 157).

The narrator of the past in the quotation above is In Hye who is Young Hye’s eldest sister. When Young Hye eventually putted in an asylum because of her constant peculiar habit, In Hye reminds that Young Hye was her father’s physical abusing target when she was a child. As a daughter, Young Hye receives stereotype as a weak woman and unable to defence the violence of his father. However, behind Young Hye’s silence, it shows her power to survive on oppression which continually comes from the domination of men, particularly her own father. In her adulthood, the experience of violence which she received from the past can be used as a base of the attempts of embodying her ‘strange’ behaviours. Furthermore, violence which she receives is come from no other men but the closest men of her. The oppression of the men by the main woman character emerges her to liberate herself from the dominance of men through subjectivity of her body.

### 3.2 Women’s Body as Resistance Strategy to Patriarchal Domination

As what is explained earlier, subjectivity of a woman’s body is the ability of a woman to release her own self from the form of stereotype based on the domination of men. Women become the subject of autonomous toward her own self entirely. The subjectivity toward women’s body represents by the figure of Young Hye in the beginning of the story as these following quotations.

The only respect in which my wife was at all unusual was that she didn’t like wearing a bra. [...] I couldn’t get my head around it. It wasn’t even though she had shapely breasts which might suit the ‘no-bra look’. I would have preferred her to go around wearing one that was thickly padded, so that I could save face in front of my acquaintances.

Even in the summer, when I managed to persuade her to wear one for a while, she’d have it unlooked barely a minute after leaving the house. The undone hook would be clearly visible under her thin, light-coloured tops, but she wasn’t remotely concerned (Han Kang, 2017, p. 5—6).

Women’s underwear (bra) which uses to protect the breast is considered as something uncomfortable to Young Hye. Whereas, her husband feels more proud if his wife has larger breast. Therefore, he expects his wife to wear bra with thicker sponges. This shows that the function of bra is not only to cover the breast, but also uses to build women’s femininity which refers to men’s sexuality. Thus, bra can be seen as a metaphor of the body curb of women which embedded with the construction of femininity based on men’s sexuality. Through her refusal of wearing bra, the main woman character in this novel shows her decision to become the autonomous human. She tries to break free from shackles of men’s sexuality which she thinks is cuffing women.

Young Hye’s resistance also can be found in a family banquet, while her father forces her to swallow cuts of meat after slaps her cheek.

‘... get away!’

At first, she drew up her shoulders and seemed about to flee in the direction of the front door, but then she turned back and picked up the fruit knife that had been lying on the dining table.
Jaw clenched, her intent stare facing each one of us down in turn, my wife brandished the knife.

‘Stop her…’

‘Stay back!’

Blood rib boned out of her wrist. The shock of red splashed over white china. As her knees buckled and she crumpled to the floor (Han Kang, 2017, p.40—41).

After receive violent behaviour of her father, Young Hye leaves the house. However, based on text above she turns back to take a knife and attempt suicide. It can be seen as Young Hye’s effort to show her power over her own body. In this case, her body is a media to fight over oppression which she received previously. It proofs that her subjectivity is a defence of a woman who previously dominated. By scratching her wrist with a knife, she indirectly ‘intimidates’ men who often violence her. The abnormal label which embedded to her because of her decision to become a vegetarian is opposed by Young Hye through her suicide attempt. It means that Young Hye tries to reveal that she has the entire right of her own body. She also tries to destruct ideology of patriarchy which binds her and put her onto marginal position. How Young Hye turns to become a vegetarian and her main reason to insist it shown in these quotes.

My wrist is okay. It doesn’t bother me. The thing that hurts is my chest. Something is stuck in my solar plexus. I don’t know what it might be. It’s lodged there permanently these days.

[..]

Yells and howls, threaded together layer upon layer, are enmeshed to form that lump. Because of meat. I ate too much meat. The lives of the animals. I ate have all lodged there. Blood and flesh, all those butchered bodies are scattered in every nook and cranny, and though the physical remnants were excreted, their lives still stick stubbornly to my insides (Han Kang, 2017, p.49).

Those quotations are the voice of Young Hye which expresses her main reason to become a vegetarian. Young Hye’s expression that something lives in her diaphragm can be understood as a critic from a vegetarian’s perspective over the violence which performed by human to other creatures such as animal for the sake of survival. Human depends and needs the lives of other living creatures to support the sustainability of their lives. This critic is photographing the side of ‘predators’ in human’s life which symbolises the ‘cruelty’ in live. With her choice to become a vegetarian, Young Hye tries to free herself from side of ‘predators’ that she feels in her body and want to release herself from the violence of human to another human being, or human to other living creatures. Even though being a vegetarian causes Young Hye exiled by her family and those who around her, she insists on her own choice which makes her as an autonomous woman who does not need to depend on anybody. Therefore, her decision to become a vegetarian can be understood as her effort to exempt from all forms of violence, as well as to destruct the chain of dominated and being dominated circle. With that reason, in extreme act, Young Hye’s behaviour shows the symptoms of her rejection to any kind of food and then she decides to consider herself as a tree.

‘I didn’t, you see. I thought trees stood up straight … I only found out just now. They actually stand by with both arms in the earth, all of them. Look, look over there, aren’t you surprised?’
Young Hye sprang up and pointed to the window. ‘All of them, they’re all standing on their heads.

[...]

‘Do you know how I found out? Well, I was in a dream, and I was standing on my head ... leaves were growing from my body, and roots were sprouting from my hands ... so I dug down into the earth. On and on ... I wanted flowers to bloom from my crotch so I spread my legs; I spread them wide...’

[...]

‘I need to water my body. I don’t need this kind of food, sister. I need water.’

[...]

‘I don’t need eat, not now. I can live without it. All I need is sunlight.’

‘What are you talking about? Do you really think you’ve turned into a tree? How could a plant talk? How can you think these things?’

[...]

‘You’re right. Soon now, words and thoughts will all disappear. Soon.’ (Han Kang, 2017, p. 148—154).

Young Hye is eventually taken to asylum since her thought cannot be perceived by people around her. Young Hye’s position in asylum is strengthening her position as ‘the other’: a woman who is ousted because of different standardisation of normality from majority perspective. An expression which considers her body as a tree cannot be simply viewed as her peculiar action but far more than it is the meaning which associates subjectivity from a woman’s body. Young Hye desires to become a tree and chooses to not living as either animal or human is because both of them are having sides to dominate and being dominated. Moreover, to Young Hye, both of animal and human have the side of ‘beast’ which sparks behaviour violence in relation to dominate and being dominated. In contrast, a tree is a source of life since it produces oxygen for living creatures.

Furthermore, Young Hye’s decision to cogitate herself as a tree can be seen as an effort to be free from dominance which oppressed her. The oppressions which came from the domination of men: from her husband and her father, can be seen as a metaphor that human and animal have ‘desire of predators’ and often perform violence. With that reason, Young Hye tries to escape from the domination of them, even though it may lead her to death since she refuses to eat any meals. As it is known as the subjectivity of her, Young Hye proves that she has the power over herself and tries to reach her freedom. Asylum has become a place for Young Hye to find her subjectivity and to liberate as well as escaping any ‘normal’ choices. For Young Hye, return and continue her previous normal live means she will be back to enter the world which dominated by the culture of patriarchy and will ‘bother’ her ‘madness’. That ‘madness’ to consider herself as a tree at the end of the story can be understood as her effort to resist and liberate herself over shackles of patriarchy construction that seize her ‘voice’. This also shows the freedom of a woman to master her own self and release all of social norm entanglement.

4. CONCLUSION
Vegetarian novel by Han Kang presents an effort of a woman to be free from the chains of patriarchy domination. The main woman character in this novel often receives violence from her husband and her father. This can be seen as the result of patriarchy which gives absolute power to the men. Young Hye, the main woman character in this novel tries to oppose the dominant construction towards women’s body which says that a woman’s body is something which makes a woman placed as an object.

The main woman character’s resistance through her body is shown through several actions. The first is from her effort to attempt suicide and it shows that she has the absolute right over her own body. The second is from her decision to become a vegetarian and it can be interpreted as her effort to release herself from every form of violence from the domination of men and also to break the chain of dominated and being dominated relation. The third is through her consideration to appraise herself as a tree which can be known as an effort to liberate her and jump out from oppressions which dominated her.

Young Hye’s ‘madness’ behavior to consider herself as a tree at the end of the story can be understood as her effort to resist and liberate herself over shackles of patriarchy construction that seize her ‘voice’. This also shows the freedom of a woman to master her own self and release all of social norm entanglement.

5. REFERENCES


Personal Interview
VIOLENT CONFLICT IN MULTICULTURAL COUNTRY, THE CASE STUDY OF THE INCENDIARISM AND VANDALISM OF A HOUSE AND PLACES OF WORSHIP IN TANJUNG BALAI, NORTH SUMATRA

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ABSTRACT

In Indonesia, conflicts based on SARA (ethnicity, religion, race, and group) are often reported. This means diversity is not been well-accepted by everybody in the country. Unfortunately, the government has never attempted to find the root of the issue. Instead, the government has been indulged in efforts to stop the conflict and to find and punish the culprits who provoked the incidents. As the consequence, there has been a lingering opinion within the society that the government is always protecting the minorities who become victims of mass riots. There have been numerous conflicts based on SARA, one of which occurred in the end of 2016, which was the vandalism and incendiarism of places of worship in the city of Tanjung Balai, in the province of North Sumatra. It was not the first incident of its kind in Indonesia. There have been many attacks on places of worships, including Christian places of worships in Aceh Singkil, Yogyakarta, and other areas.

This research uses case analysis review and perception theory (stereotype, prejudice, and conflict), as well as the theory of historical trauma, by analyzing reports from literature reviews, books, newspapers, and other credible sources. If religious pluralism is well managed, it will make beautiful contribution towards civilized Indonesia. Otherwise, it will turn into the source of violence and destructions. How should we nurture religious pluralism in order create religious harmony in Indonesia? First, religious freedom should be guaranteed. Minority religions, which are Christian, Hindu, Buddha, and Confucianism, should be guaranteed with freedom, as long as they adhere to the prevailing rules and regulations. They should not be discriminated in expressing their own culture. Second, the various teachings of many religions should be perceived as different ways of self-surrender to God. People who benefit from their own religions know what to do with the teachings of their own religions. They will not be led astray in the current social religious reality. They will not question the teachings of other religions and will consider them as religious reality that is believed by the followers of each religion.

Keywords: Conflict, Multiculturalism, Place of Worship, House Vandalism, Tanjung Balai
INTRODUCTION

Indonesia is a country of many ethnicities, races, and cultures, that are spread across the archipelago. The diverse ethnicities and races contribute to the wide varieties of Indonesian culture. Indonesia is known as a country with pluralistic society and diversity in religion, traditions, art, culture, way of life, and values hold by ethnic groups.

The diversity may give either positive or negative impacts. It will result in positive impacts if the society can accept the existence of different people. On the other hand, conflicts will arise if the society cannot cope with the diverse environment.

In Indonesia, conflicts based on SARA (ethnicity, religion, race, and group) are often reported. This means diversity is not been well-accepted by everybody in the country. Unfortunately, the government has never attempted to find the root of the issue. Instead, the government has been indulged in efforts to stop the conflict and to find and punish the culprits who provoked the incidents. As the consequence, there has been a lingering opinion within the society that the government is always protecting the minorities who become victims of mass riots.

There have been numerous conflicts based on SARA, one of which occurred in the end of 2016, which was the vandalism and incendiarism of a place of worship in the city of Tanjung Balai, in the province of North Sumatra. It was not the first incident of its kind in Indonesia. There have been numerous attacks on places of worship, including Christian places of worship in Aceh Singkil, Yogyakarta, and other areas.

The fact that inter-religion conflict occurred in Tanjung Balai proves that the government has not been able to completely solve previous religious conflicts and that the society has not been able to cope with differences of a multicultural country.

The National Commission for Human Rights of the Republic of Indonesia (Komnas HAM RI) made a press release describing the chronology of the vandalism and incendiarism of places of worships (monasteries and temples) in Tanjung Balai. The incident was allegedly triggered by a complaint of a local resident regarding the volume of a speaker installed at a mosque during azan (Islamic prayer call). The mosque is located in front of the resident’s house. The complaint triggered anger from the other residents, ended in at least 15 buildings burnt and damaged. (Source: Press Release of Komnas HAM RI No. 026/Humas-KH/VIII/2016, downloaded on 14 May 2017).

The incident started on a Sunday before 29 July 2016, when Ms. Mellina was shopping at a nearby stall belonging to Ms. Uwo. At that time, Mellina made a complaint about the volume of a speaker installed at the Al Makshum Mosque during azan. She said that the volume has been increasing in the past few days. She made the complaint to Uwo because the latter is the daughter of Mr. Kasidi, the muezzin who recites the azan at the mosque.

On 29 July 2016, at around 7 PM local time, Kasidi forwarded the complaint to the mosque administration members after the Maghrib prayer, in front of several worshippers. Some administration members then visited Melliana’s house to clarify the complaint. Argumentations were reported at that time, inviting the curiosity of other people in the neighborhood.

At around 8 PM, after the Isha prayer, more and more people were coming to Melliana’s house. The head of the hamlet decided to discuss the issue at the sub-district office. However, the issue
had been exaggerated. Some said there is an ethnic Chinese resident who forbade the Azan recitation and turned off the speaker, and many more. The wild accusation attracted larger number of people. Meanwhile, mediation and discussion at the sub-district office took quite a long time. Melliana eventually apologized for her complaint regarding the volume of the speaker during azan.

More crowds were reported from 11 PM to 3 AM, and people started to commit vandalism. Around 600 to 1,000 people vented their anger by attacking, damaging, and burning Melliana’s house, as well as several places of worships in Tanjung Balai. Approximately 15 buildings were burnt and damaged, including monasteries, temples, Melliana’s house, and an office belonging to a social foundation.

Source: http://www.sapujagat.com

After conducting investigation, analyzing data, facts, and findings, listening to witness statements, and studying reports, Komnas HAM concluded that there were information distortions committed and spread by certain people, which led to hatred against ethnic Chinese in Tanjung Balai. This ended in the vandalism and incendiaryism of places of worships belonging to the ethnic Chinese. The incident has inflicted fear and worries to the residents of Tanjung Balai, especially to the ethnic Chinese.

Inter-religion conflicts continue to occur in Indonesia, along with the development of democracy and pluralism. These conflicts may lead to national disintegration. Inter-religion conflicts are caused by several factors, including suspicion and negative prejudice between the followers of a religion and another. There are also political actors who aim to divide the society using such issues.

Suspicion or negative prejudice and lack of understanding and appreciation between the followers of religions contributed to the cause of the incident. Human dignity and universal humanity values, such as conscience, care, tolerance and unity in diversity, were no longer appreciated in maintaining good relationship between followers of religions. (Marsudi, 2016: 367-376).

**METHODOLOGY**

Method is any means used to achieve a goal. It acts as a guide in a research to achieve the expected result. An approach in a research is necessary in solving the centered issue. Arikunto (2002:136) explained that “Research methodology is defined any means used by the researcher
in collecting data for the research.” Meanwhile, Surakhmad (1984:131) said that “Research methodology is the prime means used to achieve a target.” This research will use literature review method and observation method through the internet, under popular cultural approach.

The researcher has selected data collection technique that better suits the approach, which includes observation, literature studies, and document reviews. The data obtained are later strained and presented. Important conclusions are taken based on the relations of the occurring incidents.

Theoretical Review

2.1.1 Perception Theory (stereotype, prejudice, and conflict)

Diversity should have turned Indonesia into a country that is opened to migrants and changes. However, judging from the vandalism and incendiarism of a house and places of worship in Tanjung Balai, which targeted buildings related to ethnic Chinese, we can learn that multidimensional conflicts have long occurred in this country. Yet, there has been no solution. Learning from history, conflicts between Moslem and ethnic Chinese, as well as indigenous people and ethnic Chinese, have been the manifestation of prejudice and historical trauma that bring about rupture within the society.

One of the prejudices that cause the prolonged conflicts is the prejudice between the indigenous Indonesians and migrants (ethnic Chinese). Indigenous Indonesians’ antipathy and negative prejudice towards ethnic Chinese result in stereotyping about the migrants.

A journalist named Walter Lippman defined stereotype as a generalization about a group of people, where certain characteristics are attributed to the whole group members, with disregard to the diversity of the group members.

Stereotype and Prejudice

Stereotype is a cognitive process, not an emotional one. Stereotype does not always lead to deliberate actions with harassment purposes. More often, stereotype is a technique used to simplify the way people look at the world. However, it should not blind humans from recognizing differences within individuals because it would be unfair and had the potential to turn into harassment (Suranto, 2010:121).

Prejudice and stereotypes given by the indigenous to the ethnic Chinese stem from conflicts in the past between the two groups. Those conflicts created a generalization that all ethnic Chinese are bad. The historical trauma experienced by the indigenous towards the ethnic Chinese has hampered the adaptation process between the indigenous and the Chinese ethnicity and religion. Conflicts and worries have become part of the adaptation process. Amy Freedman, a researcher from the Franklin and Marshall College, USA, stated that hatred towards the Chinese ethnicity is the result of divisive politics of late President Soeharto. In a research journal entitled Political Institutions and Ethnic Chinese Identity in Indonesia, Freedman wrote that late President Soeharto forced the ethnic Chinese to assimilate while introducing themselves as non-indigenous.
A small number of ethnic Chinese in Indonesia enjoyed many investment facilities during the Soeharto-era, making them rich. This small group of people was considered representation of all ethnic Chinese, that all ethnic Chinese gained power and wealth through deceitful ways. The fall of Soeharto in 1998 complicated the situation. Ethnic Chinese became target of hatred in many riots that occurred in many cities in Indonesia. Those incidents made it even more difficult for ethnic Chinese to assimilate. On the other hand, the hatred is passed down to generations to come, including today’s generation (Setiawan, 2013:56).

Prejudice is often followed by negative perception, resulting in the acceptance of any one-sided information that only serves one-sided truth or one group. This is what happened during the incendiaryism and vandalism of a house belonging to Melliana and several places of worship. What she complaint about, regarding the volume of the speaker at the mosque, was taken as it is by the other party (the Moslem), who considered her harassing Islamic teachings.

There are numerous stereotypes that are causing hostility and problems in multicultural country. Negative stereotyping on other beliefs or religions is one of them. Minority is considered as a group that is oppressed, and anybody reproaching and insulting a certain religion is considered enemy. Those statements are true in the Tanjung Balai case. Hatred was put above rationality, leading the crowd into anarchy and into believing that truth was exclusive to their own religion, ethnicity, or group. The incident occurred even after Melliana apologized and clarified that she neither meant to insult Islam nor forbade azan recitation at the mosque.

Negative prejudice creates both personal and collective antipathy and hatred. Ceaseless antipathy may lead to increasing extreme hatred and even torture and murder attempts. Being constantly targeted will harm one’s dignity.

RESULTS AND DISCUSSION

3.1 Alternative Solution

There are plenty of violence in the society, most of which were triggered by religious, ethnic, and cultural issues. This is a complex issue. Religious violence is the most ironic one because each religion teaches kindness and tolerance one to another. Different perception that occurs nowadays is the implementation of religious practicality in multicultural Indonesia. The differences have occurred in the past years amid dilemma and debate of religious concept that suits the diversity of the country. Many groups offer different concept of religion, saying that religion only brings about suffering in this world. Unfortunately, those alternatives fail to make changes in this multi-religion and multi-ethnic country. Instead, they invoke the selfishness and excluvism of certain groups and religious teachings, adding to the violence in the name of SARA (Setiawan, 2013:72).

The bombing and incendiaryism of churches in Poso, Ambon, Situbondo, as well as the similar incident in Tanjung Balai, prove that the society still perceives religion in a way that justifies their own religion and blames other religions. This has become the portrait of Indonesia, a country of different religions, races, ethnicities, and cultures. It appears that religious country is just a mere concept. In real life, the society has failed to understand tolerance, which actually is taught in many religious values. That failure leads to violence and riots in the name of religion. Mutual respect is nowhere to be found.

3.2 Discussion
If religious pluralism is well managed, it will make beautiful contribution towards civilized Indonesia. Otherwise, it will turn into the source of violence and destructions. The question is, how should we nurture religious pluralism in order create religious harmony in Indonesia? First, religious freedom should be guaranteed. Minority religions, which are Christian, Hindu, Buddha, and Confucianism, should be guaranteed with freedom, as long as they adhere to the prevailing rules and regulations. They should not be discriminated in expressing their own culture.

Second, the various teachings of many religions should be perceived as different ways of self-surrender to God. People who benefit from their own religions know what to do with the teachings of their own religions. They will not be led astray in the current social religious reality. They will not question the teachings of other religions and will consider them as religious reality that is believed by the followers of each religion. Different religious activities will be perceived as a silver lining of self-surrender to God. Diverse religious forms and procedures are manifestation of their attempts to draw themselves closer to God.

Late President Abdurrahman Wahid, also known as Gus Dur, believed that people with good religious quality will uphold humanity. Good humanity is based in the proper belief in religion. Humanity and religion are two sides of a coin that are inseparable. Religion cannot be harassed in the name of humanity, and humanity can never be enforced while ignoring religion (Rachman, 2010:67).

Diversity of ethnicities, races, and religions should not divide a country. It, instead, should unite a country, flourishing mutual respect and tolerance. Reasonable fanaticism and acceptance of the teachings of other religions, both realistically and theologically, will create a harmonious multicultural country.

CONCLUSION
The researcher has studied the violent conflicts occurring across Indonesia and took the riot in Tanjung Balai city, North Sumatra for the case study. The incendiarism and vandalism of places of worship are crucial issues in multicultural country such as Indonesia. This issue should be met with solution. The researcher uses intercultural communication approach and offers alternative solution by referring to the perception theory (stereotype, prejudice, and conflict). This offers ways in which diverse ethnicities, races, and religions in Indonesia may live harmoniously side by side. Negative prejudice and stereotyping should be eliminated, while encouraging mutual respect and support to keep the peace. First, religious freedom should be guaranteed. Minority religions, which are Christian, Hindu, Buddha, and Confucianism, should be guaranteed with freedom, as long as they adhere to the prevailing rules and regulations. They should not be discriminated in expressing their own culture. Second, the various teachings of many religions should be perceived as different ways of self-surrender to God. People who benefit from their own religions know what to do with the teachings of their own religions. They will not be led astray in the current social religious reality. They will not question the teachings of other religions and will consider them as religious reality that is believed by the followers of each religion.

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REFERENCES
Internet Source:
TRANSITION TO RETIREMENT AMONG RETIRED JOB ORDER FARM LABORERS: A QUALITATIVE STUDY
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ABSTRACT
The respondents of this study are retired job order farm laborers who worked in the special projects of the government (e.g. piggery and rambutan). They had no employee-employer relationship, pay was given on a daily basis, involved job orders and did not enjoy benefits of retirement. Respondents were all males with age range from 65 to 80 years, have been continuously working on the project from 10 to 35 years with an average of 26 years before retirement. It is the aim of the study to provide a qualitative description of their experiences, the interplay of gains and losses in their decision for bridge employment and explored their meaning of life satisfaction. This involved eight interview accounts following the descriptive-qualitative design. Results revealed the following themes on their experiences to retirement transition: deteriorating health; medical conditions, decrease in self-efficacy, taken retirement negatively; feeling of loneliness; loss of loved ones; missed colleagues and the daily routine work; and parenting grandchildren. The themes in their decision for bridge employment included: capable of working; increase in self-worth; skilled expertise is needed, and coping mechanism for the loss of a job. In terms of their concept of life satisfaction, two themes emerged, achieving integrity and becoming a model to their children. The results of the study have implications for policy by revisiting the implementing guidelines on hiring job order personnel and policy on protecting the welfare of old workers noting the positive effect of bridge employment in their well-being.

Keywords: Bridge Employment; Life Satisfaction; Retirement Adjustment

1. INTRODUCTION
Retirement is an example of a life-changing event in line with marriage or separation which involves an ongoing process of adjustment. Heathfield (2016) defined retirement as the point in time when an employee chooses to leave his or her employment permanently. The role theorists argue that the loss of role brought about by retirement transition can cause people to feel anxious or depressed, which may lead to low level of well-being in retirement (Riley & Riley 1994 as cited in Wang, Henkens & van Solinge, 2011).

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For the past decades, the focus of research among clinical therapist and religious institutions focused on family related issues and retirement has remained virtually unexplored until recently (Cussen, 2017). On the review conducted by Wang & Shultz (2010) for the past 20 years of empirical studies regarding the pattern of retirement transition and adjustment, it yielded inconsistent findings. Result revealed that some researchers have found that during retirement transition and adjustment, retirees tend to report poorer health, greater depression, and loneliness, lower life satisfaction and happiness, a less positive view about retirement and a lower activity level. Others have found retirement transition and adjustment to have positive impact of life satisfaction, health, and stress levels. And finally, it has also shown that it has no impact on retirees. On the other hand, one factor is seen as the important aspect that helps the retirees in the retirement transition process which is also being observed as an emerging situation in the Philippines is their decision to undergo bridge employment. Ruhm (1990) defined bridge employment as any paid work after an individual retires or starts receiving a pension. As mentioned by Hebert & Luong (2008), bridge employment can provide extra income for those who do not have enough pension income or savings in their later years and help older workers balance work and leisure time while remaining engaged in economically and socially productive activities. Thus, bridge employment can, therefore, contribute to the well-being of individuals and their families.

Much of the studies conducted were focused on the retirement adjustment of employees with regular jobs and accepted pensions and separations after cessation from work. No literature found on the retirement adjustment among workers who were paid on daily basis like farm laborers or their employment status was job order. This type of employment as defined by the Philippine Civil Service Commission under Resolution No. 020790 describes as no employer-employee relationship; the pay is on daily basis, their job order covers a piece of work, they do not enjoy benefits enjoyed by government employees and services rendered are not considered government service. Therefore, information on the experiences of the retirement adjustment of employees on this kind of job employment status will provide awareness on how they adapt to the difficulties and challenges they face in this life transition. In like manner, it will also give an opportunity to draw insights on how to improve the quality of their postretirement life. The present study described the experiences of retired job order farm laborers in their transition to retirement. Furthermore, it also explained the interplay of gains and losses in their decision for bridge employment. As well as, it identified categories on their meaning of life satisfaction.

1.2 Review of Literature

This section presents a collection of various articles and researches on retirement transitions. It specifically focused on the retirement adjustment process; gains and losses in the decision for bridge employment; and the theoretical underpinnings of adjustment during the retirement process.

A. Retirement Adjustment Process

Retirement is the point in time when an employee chooses to leave his or her employment permanently. It generally coincides with the employee's eligibility to collect retirement resources such as Social Security, a company pension, or distributions from another retirement plan. Eligibility for public and private retirement resources varies from country to country as does the retirement age (Heathfield, 2016).
Retirement like other critical transitions often affects one or more of the basic elements of an individual's life, including self-identity, self-worth, relationship with others, financial status, and daily activities, (Mehrotra & Wagner, 2009). Different studies revealed varied factors that prompt an individual toward adjustment to retirement on this life transition such as: individual attributes that have positive effect on the adjustment process are extraversion, low neuroticism (Robinson, Demetre & Corner 2010), healthy psychological and physical well-being (Donaldson & Muratore, 2010; Reitzes & Mutran, 2004; Wong. & Earl, 2008), higher income, (Donaldson & Muratore, 2010; Wong & Earl, 2008), self-esteem (Reitzes & Mutran, 2004), and self-efficacy (Topa & Alcover, 2014). However, being married and gender difference has no influence on the transition adjustment process (Reitzes & Mutran, 2004). In addition, social support (Froidevaux, Hirsch & Wang, 2016), friend identity meaning (Reitzes & Mutran, 2004) and individuals’ perception that they made a difference in the world or mattering (Froidevaux et.al., 2016; Price2003; Reitzes & Mutran, 2004) also contribute to the process of transition.

B. Gains and Losses in the Decision for Bridge Employment

Bridge employment refers to any paid work after an individual retires or starts receiving a pension (Ruhm, 1990). This is often used by older workers as part of the transition process from full-time work to retirement. It provides older workers a "bridge" between their career jobs and complete withdrawal from the work force. Often bridge jobs are customized to the needs of the individual worker, (Mehrotra & Wagner, 2009). Different studies revealed the following antecedents that are significant to bridge employment decision such as retirees who were younger, had received more years of education, had better health, had experienced less work stress and higher job satisfaction at pre-retirement jobs, and had thought less about retirement were more likely to engage in career bridge employment than in full retirement (Boveda & Metz, 2015). Moreover, other factors include those who had better health and financial conditions (de Wind, Pas, Blatter, & Beek, 2016), had experienced less work stress at pre-retirement jobs, and had thought less about retirement were more likely to engage in bridge employment in a different field than in full retirement. In contrast, retirees who had better financial conditions and had experienced less work stress and higher job satisfaction at pre-retirement jobs were more likely to engage in career bridge employment than in bridge employment in a different field, (Wang, Zhan, & Liu, 2008). In addition, (Zhan, Wang, Liu, & Shultz, 2009) highlighted the health benefits of bridge employment for retirees, employment either in a career field or in a different field was associated with fewer major diseases and functional limitations, whereas engaging in career bridge employment was associated with better mental health. Therefore, bridge employment was strongly related to retirement satisfaction and overall life satisfaction (Kim, & Feldman, 2000).

C. Theoretical Underpinnings of Adjustment during Retirement Process and Successful Aging

Retirement adjustment researchers, most frequently used three theories such as life course perspective, continuity theory, and role theory. In the life course perspective, the general premise is that if an individual has cultivated a flexible style of dealing with life transitions, is less socially integrated with work, and has attributes that help facilitate the transition, the person will more likely to prepare well for the transition, engage in the transition with better timing, and achieve better outcomes from the transition and this also predicts a positive developmental trajectory in retirees’ post-retirement life, which is characterized by gradually decreased psychological and physical demands. Another is the continuity theory, emphasizes
human beings' general tendency to maintain consistency in life patterns over time and to accommodate changes and transition without the experiences of a stressful disruption. And, the role theory focused on retirement as triggering a role transition, which may weaken or eliminate work roles, such as the worker role, the organizational member role, and the career role, while strengthening the family member role and the community member role and further it argues that the role transition can lead to positive or negative adjustment consequences, depending on whether the role transition is desirable or matches the individual's values and goals (Wang & Shi, 2014).

In addition, Wang & Shi (2014) also presented another theory in relation to retirement adjustment which is the resource-based dynamic model for retirement adjustment. Resources is broadly defined as the total capability an individual has to fulfill his or her valued needs. Various outcomes of retirement like retirees’ financial, physical, and psychological well-being as well as the factors that drive those outcomes are explained based on the availability of resources. The consequences of these outcomes influence each other to a significant extent.

Furthermore, in the life span theory (Baltes, 1997), the core assumption of this theory is that development is not completed at adulthood but ontogenesis across the entire life span and life span and lifelong adaptive process involved. He presented this incompleteness by presenting three propositions as follows: biological plasticity decrease with age, more culture to extend stages of life, and efficacy of culture decrease with age. As mentioned by Baltes et. al. (as cited in Damon & Lerner, 2006), "Biology is not a good friend of old age. With age, the genetic material, associated genetic mechanisms, and genetic expressions become less effective and less able to generate or maintain high levels of functioning." Moreover, in relation to the second proposition, more culture extends to stages of life, Baltes presented two arguments. The first argument was, "Human ontogenesis to have reached higher and higher levels of functioning and to extend itself longer spans of life, whether in physical (e.g., sports) or cultural (e.g., reading and writing) domains, there had to be a conjoint evolutionary increase in the richness and dissemination of culture." And the second argument states that "With age, the need for the supportive role of culture increases. Because of the age-related biological weakening and reduced plasticity, an age-associated increase in "need" for culture is also necessary because an environmental support is necessary to maintain efficacy." And for the last proposition, the efficacy of culture decreased with age. It was explained that the older the adult, the more time, practice, and more cognitive support it takes to attain the same learning gains. And moreover, at least in some domains of information processing, and when it comes to high levels of performance, older adults may never be able to reach the same levels of functioning as younger adults even after extensive training.

And lastly, a classical theory of psychosocial development by Erikson (1950) explained the integrity versus despair stage begins as the aging adult begins to tackle the problem of his or her mortality. During this period, people reflect back on the life they have lived and come away with either a sense of fulfillment from a life well lived or a sense of regret and despair over a life misspent. Successfully resolving the crisis at this stage leads to the development of what Erikson referred to as ego integrity. People are able to look back at their life with a sense of contentment and face the end of life with a sense of wisdom and no regrets. Erikson defined this wisdom as an "informed and detached concern with life itself even in the face of death itself." Those who feel proud of their accomplishments will feel a sense of integrity. Successfully completing this phase means looking back with few regrets and a general feeling of satisfaction.
These individuals will attain wisdom, even when confronting death. Those who are unsuccessful during this phase will feel that their life has been wasted and will experience many regrets.

Notably, based on the literatures reviewed much of the study conducted were focused on retirement adjustment and the impact of bridge employment in their well-being of regular employees. There seems to be scarcity of data explaining the process of adjustment of those employed as job order personnel and farm laborers. For these gaps, this current research then is initiated.

1.3 Statement of the Problem

This study was undertaken to find out the retirement adjustment experiences of job order farm laborers and explored the developmental outcome of their meaning of life satisfaction on this life transition. Specifically, it focused on the following:

(1) What are their descriptions of the experiences of their transition to retirement?
(2) How is the interplay of gains and losses in their decision for bridge employment?
(3) What is their meaning of life satisfaction?

2. METHODS

Research Design

This study used a descriptive and qualitative research design. Interview guide is used to provide descriptions of the common themes of the experiences of job order farm laborers, their changes, and challenges on their transition to retirement, their decision for bridge employment and meaning of their life satisfaction.

Respondents and Sampling Procedure

This study employed snowball and purposive convenience sampling technique to gather the participants for the study. It involved 8 retired job order farm laborers who have experienced bridge employment in their transition to retirement. The participants need to be at least 60 years old and above continuously working ten years and above prior to retirement.

Data Gathering Procedure

To gather the data of this study, the researcher first had to develop the guide questions for the interview. Once the interview guide is approved and prepared, the researcher searched retired job order farm laborers who experience bridge employment in their transition to retirement aged 60 years old and above. Once the retirees were scheduled for the interview, they were also asked if they knew of anyone else who had the same profile. This was done until the researcher gathered a total of 8 respondents. Consent forms were given prior to the start of the interview. Afterward, when respondents agreed to conditions of the interview, the interviews were then conducted. Responses were collected and analyzed to provide a qualitative description of their experiences.

Measures

This study made use of an interview guide to gather descriptive and qualitative data on the experiences of the retired job order farm laborers. This included several open ended
questions and checklists to provide the demographic data on the respondents. The responses were analyzed through thematic analysis.

Data Analysis

To analyze the qualitative data gathered, thematic analysis is used to describe the salient features of the experiences of transitions or retired job order farm laborers.

Ethical Considerations

Prior to the interview, the researcher explained the purpose and the process of how the interview will be undertaken to the respondents. They agreed by affixing their signature in the informed consent form provided.

Validity and Credibility

To ensure the validity and credibility of the result, triangulation method was employed. The thematic analysis was validated by two students of Doctor of Philosophy in Psychology major in Human Development and their professor in the subject Directed Research in Human Development.

3. RESULTS AND DISCUSSION

The respondents of the study are all male. Their age ranges from 65 to 69 years old with the mean age of 69. They all worked in special project of the government. And, they have been continuously working from 10 to 35 years with an average of 26 years before retirement. On their transition to retirement, all of them underwent bridge employment in the same career path. Their bridge employments were agriculture related such as planting cash crops and raising animals. Others worked also as on-call from the same project because their expertise was needed even if they already retired. Seven of the eight respondents are living with their children, one was living alone no children and his wife abandoned him.

There were eight identified themes on the common experiences of the retired job order farm laborers in their transition to retirement as shown in Table 1.

Table 1 Themes of Common Experiences of the Retired Job Order Farm Laborers on their Transition to Retirement

<table>
<thead>
<tr>
<th>Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deteriorating health</td>
</tr>
<tr>
<td>Medical condition</td>
</tr>
<tr>
<td>Decrease in self-efficacy</td>
</tr>
<tr>
<td>Taken retirement negatively</td>
</tr>
<tr>
<td>Feeling of loneliness</td>
</tr>
<tr>
<td>Loss of loved ones</td>
</tr>
<tr>
<td>Missed colleagues and daily job routine</td>
</tr>
<tr>
<td>Parenting grand children</td>
</tr>
</tbody>
</table>
The first theme was deteriorating health. This was described as, their knees are painful when working and easily acquire illnesses such as a cough, colds, and flu. One respondent was asked to retire due to frequent absences because he was always sick and the nature of their work required lot of energy and strength. And as mentioned by R4, “I can feel that my health is no longer the same compared before, now I easily get sick”. The second theme was they experienced different medical conditions such as diabetes, hypertension, heart problem, eye-cataract, and arthritis. Two among the respondents are no longer capable of working and are just staying at home due to their medical condition. The first was diagnosed with diabetes. He can no longer walk live alone and depend on his sibling for his daily needs. And the other one has eye-cataract who is already blind and his daughter sustains his needs. As mentioned by R4, “I can feel that my health is no longer the same compared before, now I easily get sick.”

My condition is very difficult, I can no longer see, even if I want to undergo an operation before, we do not have enough money. When I retired I did not receive pension either separation pay, my child helps me with my needs.

The third theme was decrease in self-efficacy. This is described as there are activities that they feel that they are no longer capable and confident of doing such as the pressures and demands of work especially if it is a very strenuous kind of work, they opt not to accept it. For instance, as said by R6, “There are types of work that I can no longer do because I am already old that is why I choose the type of work that are lighter and I know I am capable of doing.” Moreover, the fourth theme that emerged was the respondents have taken retirement negatively. They described it as unpleasant experience because they are not entitled to retirement benefits though they have already anticipated these because of their employment status. However, they felt bad because they committed themselves to the project, it became their life and despite these, they were not given a permanent employment status for them also to enjoy the benefits received by government employees. As most of them mentioned, “I get old in this job, I felt bad when I retired because I did not receive any benefits”. Furthermore, the fifth theme was feeling of loneliness. After retirement, they felt lonely because they lost their regular source of income and they have to find ways to sustain their daily needs. Others, loneliness to them is due to their medical condition; no money to buy medicine and other needs; living alone and loss of loved ones. Another common experience is the loss of loved ones. One respondent lost his daughter due to a terminal illness, she has two children, which was left under the care and custody of the respondent. Another respondent was left by his wife and cohabitated with another man and they do not have children, therefore he was living alone. Another was a widower. The seventh theme that was experienced was they missed their colleagues and their daily job routine. Some of the respondents one to two months after retirement still continuously visit the project site at least two to three times a weeks and still help in the operation even without compensation because they missed their job and daily routine including their colleagues. They described the nature of their previous work, what they do every day, how they bond with their co-employees. And how they missed the days when they are still working on the project. As mentioned by R3, “I miss my colleagues, we treat each other as brothers.” And lastly, it was common to them parenting their grandchildren. Almost all of the respondents experienced parenting their grandchildren except for one respondent who does not have a child. For them, grand parenting gives joy and satisfaction. Parenting their grandchildren gives them sense of purpose, worth and stress relieving. As mentioned by R3, “My grandchildren gave me joy, even if I am tired when I am with them I feel relieved”.
Furthermore, it is part of the experience of the respondents on their transition to retirement were their decision to undergo for bridge employment. There were four identified themes regarding their decision to undergo bridge employment as shown in Table 2.

Table 2 Themes on the Decision of the Retired Job Order Farm Laborers to Undergo Bridge Employment

<table>
<thead>
<tr>
<th>Capable of working</th>
<th>Increase in self-worth</th>
<th>Skilled expertise is needed</th>
<th>Coping mechanism for the loss of job</th>
</tr>
</thead>
</table>

Respondents chose to undergo bridge employment because they are still capable of working. This is seen in the response of one respondent R7 states that, “Despite the fact that sometimes I feel weak I am still capable to work”. Another is selecting to undergo bridge employment to increase the self-worth of the retirees, as was described even if they are already old they are happy if they can help their children in providing the needs of their family. Through planting in the backyards and taking care of animals like goats or pigs will help sustain the needs of their family and they feel worthy if they can still contribute something. As mentioned by R8, “Even if I earn a little I still plant to help my son who is working, I am happy if I work because I feel that I still have worth in the family”. Another is they decided to undergo bridge employment because there are people who still needed their skilled expertise. One respondent even if he was retired he was still constantly called as part time worker in the project because of his skilled expertise was needed and advice was solicited from him for the improvement of the project. And the last theme was they decided to undergo bridge employment for them to cope up with the loss of job, after retirement they need to sustain the needs of their family. For example as mentioned by R4, “There is a need for me to find ways in order to provide the needs of my family that is why I was compelled to find another job after retirement”.

In addition, the transition to retirement could lead to life satisfaction. There were two identified themes on what is life satisfaction means to them as presented in Table 3.

Table 3 Themes on What is Life Satisfaction Means to the Retired Job Order Farm Laborers

<table>
<thead>
<tr>
<th>Achieving integrity</th>
<th>Becoming a model to their children</th>
</tr>
</thead>
</table>

The first theme is achieving integrity. They described it as they are satisfied with their life if there is peace in their family and within themselves and they are being respected by other people. Like for instance as said by R8,

*I am already old, I want a peaceful life, harmony at home, I have already experienced a lot of thing, even if I die I am ready specially if I can see my children ok with their lives I will be happy to die.*
Another is they are satisfied with their life if they become model to their children. For most of the respondent even if they feel that their health is deteriorating they still try their best to provide the needs of their children because they want to show to them the value of hard work and perseverance amidst the financial constraints that they experience, if they work together they can cope up with it. Three among the respondents, upon retirement they were succeeded by a member of the family, a son or son-in-law on their previous job. They were able to transfer the skills to their love ones.

**DISCUSSION**

The deteriorating health and medical condition observed among retired job order farm laborers is due to the effect of aging, the mean age of respondents is 69. Baltes (1996) on life span theory of development, emphasized that biological potential decrease with age thus, with age, they become less effective and less able to generate or maintain high levels of functioning. Likewise, in terms of the decrease in their self-efficacy, the life span theory also argues that older adults need more time, practice and cognitive support. The older adults may never be able to reach the same levels of functioning as younger adults even after extensive training. However, despite the decline in health, medical condition and self-efficacy, old age increase in dignity and wisdom which is also evident on the experiences of the respondents. Their skilled expertise is still needed even after retirement which is one reason for them to continue working even after retirement.

Furthermore, they also took the retirement experience negatively. Reitzes and Mutran (2004) revealed in their study that pension eligibility increased positive attitude toward retirement, it provides an important source of financial security during the transition. And, this is contradictory to the experience of the respondents where all of them were not receiving any pension that made them take retirement negatively and these financial constraints also affected other aspects of their life like their health and medical conditions. In addition, in the resource-based dynamic model for retirement adjustment proposed by Wang and Shi (2014) the capability of the individual to fulfill his valued needs could affect the various outcome of the retirement adjustment. The insufficient financial resources experienced by the respondents lead to take retirement experience negatively.

Moreover, negative emotional experiences were also salient to them such as the feeling of loneliness; loss of loved ones; and missed colleagues and the daily routine work. On the study of Price (2003), among fourteen retired women from New York respondents also experienced the feeling of loneliness following retirement however their descriptions more closely related to their widowhood status as opposed to the retirement transition. In the present study, the negative emotional experience is due to the loss of the role in the family (e.g. death and loss of child and wife) and retirement transition (e.g. loss of job, daily income, and changes in daily routine) that leads to the feeling of loneliness.

In addition, another experience highlighted in the study is on parenting their grandchildren. The role that the respondents perform in parenting their grandchildren requires lesser investment and energy since they are only required to look after their grandchildren while parents are working and the responsibility of providing the needs of the child lies primarily on their parents thus parenting their grandchildren gives the feeling of joy and satisfaction. In addition, (Froidevaux, Hirchi, & Wang, 2016) argued mattering represents a positive self-concept dimensions through which received a provided support to increased well-being and better
retirement process. Mattering implies that people are not only connected to others but they feel, they are important to others. The present study also supports this argument, retirees feel that parenting their grandchildren is an important role that they do and they feel that their involvement matters and they can still contribute to the family.

The decision to undergo bridge employment reflects the Life Course ideas, people operate with the sense of agency, (N.P. Newman, 2016). Despite the fact that they are already old and health is deteriorating they choose to undergo bridge employment to cope up with the loss of the job as well as it increased their self-worth and they feel that they are still capable of working. In Baltes (1996) model of selection, optimization, and compensation, the selection process is used in their decision for bridge employment, age-associated losses in their biological potential or plasticity increased the pressure for selection, they choose a type of work that they are capable of doing. And bridge employment is used as a compensation strategy to cope with the loss of their job. Thus, in the case of the respondent's selection and compensation became increasingly important to maintain adequate levels of functioning. Further, crystallized intelligence (acquired knowledge and skills) usually remains relatively stable; gains are possible with age. And this is true to the respondents as describe their expertise are still needed or solicited which prompt them to decide to do bridge employment after retirement. In addition, Boveda & Metz (2015) revealed in their study that older workers choose to continue working for the sense of fulfillment, social belonging, identity, self-worth or even maintain the daily structure. And this finding is supported by the present study, bridge employment increased the self-worth of the respondents.

Furthermore, their concept of life satisfaction is based on how they achieve integrity and being a model to their children. These experiences of the respondents is similar to the the psychosocial theory of the development of Erikson (1950), the integrity versus despair stage. They are able to look back at their life with a sense of contentment and face the end of life with a sense of wisdom and no regrets. In the present study, the respondents found satisfactions by seeing themselves if they are at peace with their family and themselves as well as their worth are being valued.

The result of the study has implications for policy concerning benefits of retired job order farm laborers, such as, revisiting the policy and implementing guidelines in hiring job order personnel in the special projects. And another is policy on protecting the welfare and providing grants to the older population who are into bridge employment noting the positive effect of bridge employment in their well-being. Furthermore, the results of the study revealed the experienced difficulties and challenges of the retired job order farm laborers would serve as good entry points for counselors, social workers, psychologists, and mental health professionals to build evidence based interventions that help address those concerns. In addition, research on exploring the psychological wellbeing of the retired job order farm laborers is recommended for further study.

As with all studies, these study has several limitations. Similar to any exploratory techniques, this study only serves as the initial snapshot of the phenomenon. Thus, there is a definite need for further replication of the result. In addition, the overall sample is not a representative of the population hence we can not claim for the generalizability. And the self-report nature of the instrument is another limitation.

4. CONCLUSION
Based on the preceding discussion of the results, several conclusions were drawn from this study. There are positive and negative experiences encountered by the retired job order farm laborers in their transition to retirement. On the positive side parenting their grandchildren is an important role that they do and their involvement matters because they can still contribute to the family. However, it was also marked with unpleasant experiences. But despite of this negative experiences supportive resources are present that helped them cope. In addition, their decision for bridge employment played also a significant role in their retirement adjustment. And these experiences foster them to achieve life satisfaction.

5. ACKNOWLEDGEMENT

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MISCONCEPTION ABOUT JIHAD AND MARTYRDOM IN THE 21ST CENTURY: THE ROLE OF SCHOLARS IN SAVING ISLAM AND HUMAN LIFE

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ABSTRACT

The word jihad in Islam which means strive or struggle is a wide concept that comprises of parts. Presently, this concept of jihad (strive) in Islam in witnessing a different phenomenon in this contemporary world which is revealing a blameworthy outcome. Several verses of the Qur’an have made mentioned of jihad (strive) with ether wealth or life of both. The Prophet (SAW) has categorically stated the highest type of jihad: which is against the egocentric or whims and caprices of an individual. In this era, there are many casualties from different areas of the world of killing in the name of God. Islam as complete way of life attached so much values to life. Therefore, this paper aims at stressing the role of scholars especially those in Islamic studies to clarify the meaning of jihad in a comprehensive manner to save human life. Man is created to serve Allah not to kill or be killed. The way of massing killing in the name of martyrdom is strange and did not represents the actual teachings of the Prophet (SAW). The paper therefore suggests the scholars have significant contribution to make in this respect; in order to make a better people who can live and serve Allah in the best way. I-war should be utilize by the scholars to conduct jihad for the betterment of humanity rather than killing. To urge Muslims to partake in moderate path of handling the concept of jihad, and exercise to greatest against the self-ego as best way to execute such a task.

Keywords: Jihad; Islam; Martyrdom; Scholars; and Save
1. INTRODUCTION

The inclusiveness and interrelatedness of Islam as a religion that covers the entire human life of action and belief, thought and practices, can be fully appreciated when realized and analysed within the framework of Islam itself (Ezzati, 1986). Muslim belief and ascertain that this life is mortal and the essence of life after dead is to conduct jihād and attain martyrdom. The quest for everlasting life and attaining the pleasure of Allah in the hereafter make Muslim to go for jihād and achieve martyrdom (Al-Fazl, 2002). The 21st century Muslim world is witnessing new interpretation of the concept of jihad and martyrdom in Islam. This new concept and interpretation is opening a way for wanton killing of innocent civilian from among both Muslims and non-Muslims. Besides that (Mythen et al., 2009), it portrays the notion that Islam, is not a religion of peace, and Muslim are terrorist as exaggerated. At the same time, it opens up for extremism among Muslims (as well as non-Muslims), with a wrong notion and unjustified intention to die for the sake of Allah, and acquire martyrdom. Every day of life, there are news of Muslims detonating themselves and killing others. And the leaders of such societies hunt upon its citizens based on such action, and are condemned as terrorist. This has made non-Muslims develop a phobia against Islam and Muslim. On the other hand, youths are misguided and recruited every day for the action of jihād.

Several literature have discussed about the concept of jihad in Islam as explained by Kilani (2015). Others consider the doctrine of jihad as according to (Peters, 1980), that it can only be fought under the leadership of an imām. At the same time kamali (2014), explains how the concept of jihad is distorted and portrayed by the west as ‘holy war’ while Moniruzzaman (2008) consider it as foreign concept in Islam. In an article by (Ramlan et al., 20015), the various definitions of the term jihad is elaborated and its explanation by the scholars is given. Thus, the aim of this paper is to discuss the role of the scholars in restoring the image of Islam as practiced by the Prophet (SAW) and the companions. The Prophet has categorically stated that the highest jihad is to strive against the ‘self-ego’. One of the methods to adapt is moderate mode as enjoined by the Qur’an and exemplified by the Messenger of Islam, in resolving this issue Kamali, 2005).

2. METHODS

The method of adopted by this research is based on the internet material and available books in the library. Besides, it also utilizes the information from the media indicating the act of jihād or martyrdom.

3. The Concept of Jihād (strive) and Martyr (Shahīd) in Qur’an and Ḥadith

The word jihād is an Arabic word originated from the root Jahada which means struggle or strive or to exert. It also designates “Work wholeheartedly” (Mansur, 1992:9). It thus signifies any form of action, either personal or for the community of Muslims, with the aim of striving for the cause of Allah and Islam (al-jihād fi sabil Allah) (Qutb, 1981). This translation points to the polysemy of the term jihād
and the potentially different meanings that may be ascribed to it in different contexts, since the phrase “in the path of/for the sake of God” allows for human striving to be accomplished in multiple ways. Thus, Jihad consists also of the effort to fix something good and to avert or oppose evil (Qur’an 3:104, 110, 114; 7:157; 9:71, 112, etc.). The “struggle” implicit in the application of this precept is jihad, properly and plainly speaking, and the endeavour is both individual and collective. The means for carrying out this struggle vary according to circumstances, and the Qur’an often refers to those who “strive with their wealth and their selves” (jahadu bi-amwalihim wa-anfusihim; e.g., Qur’an 8:72).

This is how Muslims understood the concept as shown from the Qur’ān and expatiates by the moderate Muslim scholars. Ijtihād is as well from the same word jihād, (Noorani, 2002) which is exertion of the intellect, and it’s recognized as a source of Islamic law. Scholars have made ijtihad in order to arrive at solution to certain kind of problems. It is an indication of an effort and hard work for the sake of Allah and guide people by disseminating the religion, explaining to layman about Islam.

The Qur’an, indicates multiple meanings of jihad that range from non-combative to combative. Furthermore, the Qur’an does not have a single word for “martyr” or “martyrdom,” concepts that became intrinsically linked to the concept of jihad as armed combat against the enemies of Islam. One of the Qur’anic verses (3:169; cf. 47:4; 2:154) that has been construed to refer to the special status of the military martyr runs thus, “Do not think that those who were slain in the path of God are dead. They are alive and well provided for by their Lord.” Some of the exegetical and hadith works, however, make clear that the phrase “slain in the path of God,” was not understood to be restricted to those fallen in battle, but could be glossed in several ways.

The concept of martyrdom (shahada) in Islam can only be understood in the light of the Islamic concept of Struggle (jihad). While the concept of jihad may only be appreciated based on the concept of enjoining right and discovering wrong (al-amr bi’l-maruf). (Qur’an, 3:104.Cf. 13:11, 8:23, 8:29, 8:53; 91:8-10). Good and bad, right and wrong deeds can only be understood through the revealed sources, and how the messages conveyed to humanity are honestly and properly understood.

The common Arabic word for martyr became shahīd. Nowhere in the Qur’ān is this word used for a martyr; rather it is only used, interchangeably with shāhīd, to refer to a legal or eye witness. Only in the later tradition does this word acquire the specific meaning of “one who bears witness for the faith,” particularly by laying down his or her life. Extraneous, particularly Christian, influence may be suspected here (Hasluck, 1930). The contact of the Muslims with the Christian in the 7th century might have contributed to that. The term shahīd in the sense of martyr-witness only in the hadith literature, implies the later development of this strand of meaning.

According to Afasruddin, (2016) there are several reports that challenged the growing prevalence idea of jihad as predominantly armed combat, which leads to
Roman-ticization of the concept of military martyrdom. Most of the information are attributed to the companions (mawquf: “truncated”) rather than the Prophet himself. Examples can be cited from the narration of Abu Huraira (d. 62/681) that the shahid is one who, were he to die in his bed, would enter heaven. (‘Abd al-Razzaq, 2000). Meaning someone who dies on his bed and without sin (la ḍhanb lahu). Another record of the same author declared that, people who died as a result of the plague, parturition or delivery of a child, drowning, and a stomach ailment, have attain shahīḍa. ), (5:268). There is no mention of martyrdom being in the battle in this report. The other one that is included is “one who is killed in the way of God (man qutila fi sabil Allah).” (Bukhari).

The Muwattaʾ of Malik b. Anas (d. 179/795) records that the Prophet identified seven kinds of martyrs, in addition to those who died from fighting in God’s way. Thus, “He who dies as a victim of an epidemic is a martyr; he who dies from drowning is a martyr; he who dies from pleurisy is a martyr; he who dies from diarrhoea is a martyr; he who dies by [being burned in] fire is a martyr; he who dies by being struck by a dilapidated wall falling is a martyr; and the woman who dies in childbirth is a martyr.” (Muwattaʾ, 1:366–367).

The above reports assigns martyrdom to the believer who suffers a painful death from a variety of debilitating illnesses, from a difficult labour in the case of women, or from falling victim to an unfortunate accident, such as being crushed to death by a falling wall, in addition to falling on the battlefield. These early expansive definitions of a martyr are an important corrective to the later predominantly military significations attached to the term shahīd. Prehab’s the honour of martyrdom of being forgiven and with high status in Jannah, are part of the factors that prompt Muslims to involve into this kind of jihad alone, ignoring other modes of jihad in Islam.

4 DISCUSSION

4.1. Systematic Deviation from the actual Concept of Jihad and Martyrdom

Striving for the sake of Allah to establish something good and eliminate evil has now been distorted by both Muslims extremist and non-Muslims alike, due misunderstanding of the actual meaning of the term, or deliberate action. Even though, it may depends on the situation and the circumstances for self-defense or any recognized element by Islam that warrants such. But ordinarily for the sake of martyrdom, without following the Qur’anic injunctions and prophetic traditions, it does not portrays the actual meaning of the concept as enjoined by Allah.

As the concept of jihād has become the most influential misconceptions about Islam, and that Islam has spread by the sword has given roots to the rising terrorism across the globe. Islam has always respect and gives freedom of religion to anyone. The Qur’an says: “There is no compulsion in religion”. The commercialization of arms, besides the distortion of the term has made the term disturbing to non-Muslims, they connect it with religious extremism and
indiscriminate violence. Thus, for sake of inventors of war weapons to find a means to dispose their products for an income. Digging deeper into the matter, pronouncing the word ‘jihād’ instills fear into the heart of a non-Muslim, because the orientalist portrays Islam as a religion disseminated by the sword.

This is done deliberately by the enemies of Islam to distract the attention of both Muslims and non-Muslims from the actual meaning of the concept, while the Qur’an does not means war by the term. There plenty of Arabic words denoting armed combat, such as harb (war), sira’ (combat), ma’araka (battle), or qital (killing), which could have been used such, if war had been the Islamic principle way of engaging an effort. The Qur’ān employs this Harb term four times: to refer to illegitimate wars fought by those who wish to spread corruption on earth (5:64); to the thick of battle between believers and non-believers (8:57; 47:4); and, in one instance, to the possibility of war waged by Allah and His Prophet against those who would continue to practice usury (2:279). This term is never used with the phrase “in the path of Allah” and has no bearing on the concept of jihād (Afsaruddin, 2016). Instead, the Qur’an chooses a vaguer richer word with a wide range of connotations.

Another thing that might be attributed to this, is the implementation of the real jihād which is making an exerted effort wholeheartedly to progress. This will ginger the Muslims world into struggling to be at the top. This was and remain a duty for all museums to commit themselves to all forms of struggles. These includes besides the physical moral spiritual and intellectual efforts, to create a just and descent society, where the poor and the vulnerable are not exploited, in the way Allah intends man to live. In actual sense, jihad is the effort or struggle towards oneself to control and refine one’s ego, to conquer ignorance, to discipline one’s immoral desires, and to excel in the work undertaken to the best of one’s ability, is the jihad of the self (jihad al-nafs). The effort to eliminate corruption and abuse, fight poverty, combat diseases, build houses for the poor, would all qualify as jihad of great social benefit for the society.

This method is utilized to topple down and eliminate as many lives as possible specifically the number of the Muslims in the world. The unfortunate thing is, the Muslims themselves desist from using the term due to how it is portrayed. Actually, using the term in its appropriate way is the best way to interpret its notion.

4.2. The Role of Scholars in Restoring the Image of Islam and Human life

The Qur’an value the life and property of all human being. It equivocally stated the killing of an individual equal’s destruction of the entire nation (5:32). There several verses of the Qur’an warning against self-destruction. In Islam, Jihad is more accurately described as the struggle to be a dedicated Muslim. Thus, the role of the scholars these days are more crucial and their responsibility more significant. Among such roles that scholars should play is educating people generally about the diverse meaning of the concept of jihad and martyrdom in Islam.

4.2.1. Strive to Propagate the Message of Islam
Strive to guide people about the actual teachings of Islam in respect to jihād. There are several rules and regulation of jihad to attain martyrdom for the sake of Allah, which are violated in this new era of self-destruction. For example: not to destroy houses, or to mutilate or commit treacherous actions, killing civilians, who do not involve into war. Not to cut down fruit trees nor burn houses and cornfields and to refrain from killing livestock. All are not considered in the quest for so called “shahāda. The value Islam attached to saving life should be clearly explain for people to understand by the scholars. So that the rich diversity of meaning associated with the term from the Qur’an and Sunnah of the Prophet. The excellences of the “combative jihād” often greatly exaggerates merits of falling on the battlefield in defending the realms of Islam, be explain by the scholars in relation to the contemporary world situation. There are diverts ways to die as a martyr not necessary self-killing and destructions. These are done in order to re-direct the quest for the highest honour of shahada. The scholars should strive to dispel the common negative misconceptions that surround jihad and martyrdom. Educate the public on the reality of Islam that Jihad is not a motive to be intolerant of other religions, self-destruction, and property obliteration, to mention a few.

In order to begin reversing the misconstrued ideas, which have led to misconceptions of Jihad, everyone needs to be a part of the change. The truth should be known, as people are misinformed. This should be made clearly by the scholars and take a stand when it comes to religious tolerance, separating Islam from violent extremists, racial profiling, women’s rights, freedom of worship, and many more issues that surround the topic of jihad. By being dedicated to providing an Islamic perspective on issues of importance attached to jihād and Shahāda in Islam.

4.2.2. Struggle against the Self-ego

Among the duties of the scholars in this regard is to redirect the concept to its actual connotation. The Prophet is reported to have said that the greatest jihād is fighting the animal tendency in human. This shows it is internal rather than external: striving in the path of Allah to overcome the human animal side, which is dangerous when left loosely. To bring these passions under control, means jihād. There various ways to conduct such. The prophet made mentioned that Mujāhid (person who does jihad) is the person who does it against the lower self in obeying Allah the mighty the sublime (Musnad: 24678). This is indicating a higher valorisation of the spiritual human struggle over the physical.

Patient in controlling the self or in general, over the practice or implementing the religious injunctions, can be part of jihad as well. There are reports from the Prophet on such aspects. The Messenger of Allah, (peace and blessings be upon him), wept and we asked him, “What has caused you to weep, O Messenger of Allah?” He replied, “I reflected on the last of my community and the tribulations they will face. But the patient from among them who arrives will be given the reward of two [military] martyrs (shahidayn).” This categorically challenges other, better- known reports which assign the greatest merit to military martyrs and posits instead a different, non-militant understanding of virtuous self-sacrifice. These two literary
genres—the excellences of fighting versus patience—taken together represent competing but also complementary articulations of how best to struggle for the sake of Allah.

Currently, the matter is indicating the control of the devil over human, through a deceptive way of attaining highest honour of martyrdom. Reminding the Muslims of the tricks of Shaitān is very important in this respect. Being an opened enemy is categorically stated in the Qur’an, 2:168. Cf.2:208; 36:60; 7:14-18. The scholars are obliged to remind Muslims about these hidden tricks. Therefore, the different categories of jihad be made clear for Muslim to abide by and non-Muslims to understand Islam clearly, by the scholars as part of efforts to educate the public.

4.2.3. Neutralise the I-war on Islam and Muslims

A Muslims as enjoined by the Qur’an, should be an all-round individual, as far as this world and hereafter are concern. More especially to be up to date in this contemporary world, he should live to the utmost of it. All these false accusations are contemporary methods to distort and misdirect Muslims and Islam through the concept of jihad and its fruits of martyrdom, are disseminated through the media. The scholar should use the same media to rectify the issue and educate Muslims and non-Muslims alike. Expose of Islamic religion’s culture for all to understand.

Hence, da’wah—performing the activities of propagating Islam and its related fields of knowledge—is the cornerstone of the ‘building’ of Jihad and its rules; and any attempt to build without this ‘stone’ would damage the meaning and reality of Jihad. This is as against the information war of the modern era of distorting Islam and destroying human life in the name of jihad and attaining martyrdom.

Encourage Muslim NGO’s to think out of the box. To involve in the affairs of the humanity not just Islamic world. Remove all misconceptions and stereotypes in clarifying the image of Islam held by non-Muslims. Build a trusting relationship and work with them in ways that accord with their way of thinking, are all primary forms of Jihad. An all-round dissemination of knowledge about Islam from outside the Islamic aspects, like the technology and any other secular knowledge should of the goals to be achieved by the Muslim NGO’s.

4.2.4. Proficient Scholars

Muslims scholars should be Versatile, flexible, resourceful, talented and skilled and well prepared with knowledge in the modern era. These includes preaching and educating about the religion of Islam, dismissing all the uncertainties about Islam and making available all the skills and qualifications which people might need in the religious, secular, physical and financial interests. Because these constitute the regulations of both this life and the life to come.

Similarly, establishing a strong community and nation which can fulfil all physical needs of its people, thereby creating for them conditions in which the message will be heard, rather than being lost in the strife and struggle of everyday life, are requirements and form a basic building block of the Jihādic concept. These
foundations fulfil the Qur’anic injunction, “Let there arise out of you a band of people inviting to all that is good, enjoining what is right, and forbidding what is wrong: and these it is that shall be successful”. (Qur’an, 3:104). These are some of the duties to be fulfilled by the scholars to accomplish the conditions of jihad redirection form humanity’s mind-set of the concept.

5. CONCLUSION

In conclusion, this research urges Muslims scholars in particular to redirect their efforts in disseminating the message of Islam in order to save Islam from external destruction by its enemies. At the same time, it urges the Muslims and non-Muslims alike, to strive hard to understand the actual message in the concept of jihad and martyrdom. This is not to fall prey of the trap of Shaitān. The same can be said of the non-Muslims, to read a lot about Islam from authentic material available. Importantly, the information media should be utilize judiciously by the Muslims to propagate Islam. Besides that, implementing the akhlāq (ethics) displayed by the Prophets is one of the best ways to conduct jihad and attain martyrdom.

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RE-DEFINITION OF CARING FOR OLDER PEOPLE: Experiences in a rural community in the Philippines

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ABSTRACT

Care arrangement for older people that involves family members particularly women, is still the most common and most acceptable in the Philippines particularly in the rural areas. In this care arrangement, biological daughters are the preferred sources of care or caregivers. Because of economic pressures however, these preferred care-givers started to leave the community in order to work in the cities or abroad, knowing that leaving will allow them to provide more care, albeit in a different manner.

This paper describes a type of care arrangement for older adults that involves family members, with a particular focus on the three major components of caregiving—the source of care, the manner of caregiving as well as the motives for caring. This also characterizes the process of re-defining care as a response to the challenges that older adults and their caregivers have been experiencing. Data used for this paper were gathered through in-depth interviews, participant observations as well as casual conversations with older adults and their caregivers in a rural community that I have been visiting since the late 1980’s, as a student and as a researcher. For this paper, I tried to revisit sets of data and review major findings in order to have a more complete and holistic understanding of the phenomenon of ageing as well as caring for older adults particularly in more rural setting.

Analysis of data revealed that older adults and their families have been experiencing different challenges in caregiving. As a response to a changing social milieu, the family had to resort to a strategy that involves a re-definition of care in terms of its three major aspects: the type of care, the caregiver and the motives for caring. First, re-defining requires a change in the type of care. The traditional physical or body care that requires people to be near in order to care, has slowly been changing into a new structure that allows family members to provide care even when they are far away. Second, re-defining involves an acknowledgement of other family members, as providers of care. In this new form, sons, daughters-in-law and grandchildren come into the picture of caring as the next preferred caregivers. Lastly, re-defining also requires an acknowledgement that there are other reasons for caring which are beyond respect and sense of gratitude. Re-definition results to a recognition of motives which are more practical.

Keywords: Caregiving; Dimensions of caring/caregiving; Elderly/older people;

1. INTRODUCTION

The world population is ageing. With a growing number of elderly people in the world, comes a growing concern about their wellbeing. Available literature would attest to this growing
interest to emphasize the varied meanings that different cultures attach to their ageing experiences, and to understand the dynamics of care provision for older members of their own societies.

A review of available literature on the phenomenon of ageing suggests the following realities. Elderly have various needs that should be addressed. In the process of addressing those needs, three major aspects of care are emphasized. These are the forms of care, the source of care and the motivations for caring. These different dimensions in general spell out the different types of care arrangement for the elderly. It includes professional care in institutions, professional care in the older persons’ private homes, private care by hired servants in older people’s homes and care by relatives in the home-setting. This paper focuses on family caregiving—a type of care arrangement that involves the family as primary source of care.

Literature also suggests that generally the source of care for older people is most of the time women, although they could also be categorized according to the type of care arrangement as either family members, hired servants or professionals who are also paid for the services that they render. The process of care provision, again as suggested by the types of care arrangement, is characterized by different forms and activities involved. In terms of the third aspect, three major motivations are often cited in the literature. These are moral obligation because of societal expectations, respect that is also closely-related to moral obligation, and reciprocity.

The concept of care has myriad connotations and implications and different meanings surround this concept in general. Common among these are the ideas of attention and effort, and avoidance of harm and damage. One way to understand this concept of care is to look at it in terms of having two basic constituents—the technical and the emotional (Van der Geest, 2002). The technical component on the one hand, suggests that ‘a concrete activity should be done for others who may not be able to do them alone’. When one does something for another person who cannot do it by himself, the doer complements the receiver of the action. The emotional component on the other hand, suggests that there are certain emotions involved that would result to the doer being concerned with, dedicated to and eventually being attached to the receiver of the action.

Tronto (1993) defined care as ‘an activity that includes everything that we do to maintain, continue and repair the world so that we can live in it as well as possible’. This is a general definition that could apply to many situations but the suggested components are quite clear—somebody does something meant for another person and there is always a reason for doing it. It may however, not as simple as it may seem to be. There are other covert implications of the definition. Other dimensions such as people’s motives and factors shaping those motives need to be looked into, if one is to understand what care really means.

Care is also characterized in the literature (Tronto, 1993) as having different interconnected phases: caring about; taking care of; care giving; and care receiving. This means that while people often think that there is always a concrete and direct giving of care, this may not always be true. There are ways of showing care over and above the direct physical care giving. ‘Thinking about’, being ‘concerned about’, ‘feeling about’, ‘feeling responsible about’ somebody, and the response that you can get when you make yourself concerned of other people, make the characterization of care more holistic.
An implication however of the characterization of care, that it is “one of the central activities of human life”, and that “it is a process that sustains life” is that, care could be regarded as a given and as something automatically embedded in human life and existence, therefore, a natural thing to happen. This is not the case as literature shows. Caring, as described in the literature, is not a natural thing and that there are different considerations that would prompt an individual to care for others in different cultures. Caring also involves the pleasure that caregivers derive from feeling needed.

Among the elderly, the need for care could also vary according to various factors and circumstances such as their actual age, whether they have some forms of illness or not, and some other considerations. Some of them might need other people to do things for themselves, because they could no longer do it, but others would perhaps prefer to be just given the assistance and not necessarily other people doing ‘things’ for them (Foner, 1992; Tronto, 1993; Van der Geest, 2002).

Care is oftentimes not a straightforward human activity such as a physical activity done for another person. There are hidden meanings, unseen implications and connotations of the definition of care, particularly for the elderly and this could vary from culture to culture. Covert as they are, they need to be brought to the forefront through a closer look at what people are doing for other people who cannot do things for themselves. The given dimensions should be highlighted so that the hidden meanings would come out for people to understand (Tronto, 1993; Komter, 1996).

2. METHODS

Data used for this paper were gathered through in-depth interviews, participant observations as well as casual conversations with older adults and their caregivers in a rural community that I have been visiting since the late 1980’s, as a student and as a researcher. The various qualitative methods used did not only facilitate data gathering but also allowed a deeper understanding of the phenomenon of family caregiving for older adult members in a rural and more traditional setting.

3. RESULTS AND DISCUSSION

Ageing and Care in a Rural Community

3.1 Becoming an older adult

The Filipino term for growing old pagtanda, literally means ‘taking note of’. It comes from the root word tanda which also means, ‘sign’. Tandaan, its verb form, means to take note of or to know. Growing old therefore implies knowing. It suggests wisdom. Older people are expected to have knowledge about things that younger people might not yet have.

The saying ‘wisdom comes with age’ aptly describes the process that people are expected to experience from a younger age to adulthood then to old age. This expectation is manifested in the way older people are highly regarded by the younger generation. Older people enjoy a high status in the Filipino society because of the experience and wisdom that they are supposed to have accumulated in the course of life. Older people have always been an important and worthwhile component of the society. They are considered useful and are still involved in decision-making processes not only in the family but in the society as well.

3.1.1 Perceptions of growing old
To most of the people in this rural community, getting old is a normal, expected and inevitable phase of life that one must go through. People do not dread passing through this stage. It is in fact an honour and a compliment to be regarded as an older person. Generally, growing old is a positive thing. In fact older persons are not considered unfortunate or pitiable. They are are treated with high regard not only because of the kind of person they are but also because of their age. A typical way of showing respect to older people is by kissing their hands which is referred to as pagmano in Filipino, which is also considered in the Philippines as the most obvious ritual of respect to older people. When somebody meets an older person, some forms of greetings with courtesy are expected.

3.1.2 Terms used to refer growing old and to older adults

Different terms are used to refer to growing old and to older persons. While in Filipino language it is labelled as pagtanda, in this community it is known as paggurang. An older person is referred to as matanda (in Filipino) and gurang or gurangon. Some of them are also using may edad (already with age) to refer to older people.

While Filipino kinship labels Lolo and Lola are used to refer to grandfather and grandmother respectively, in this community, people prefer to use labels that are actually used to refer to parents (i.e., using the label Pay to call a father as well as a grandfather and the label May to address a mother or a grandmother). This kinship labelling is also true in other parts of this region.

3.1.3 Reckoning old age

Based on my conversations with people in the community, getting old is reckoned in different ways. There are different signs and characterizations that need to be considered and acknowledged. One way of reckoning age is through the number of years. Most of older people in the community consider people in their 40s and 50s not yet old. They are just in the process of growing old just like anybody else. My informants would refer to them as naggugurang-gurang na (in the process of growing old) but they are not yet old, according to them. When somebody reaches the age of 60, he/she could already be considered may edad na (already with age or getting older). Within the age range of 70s and 80s, there is already no doubt, according to my informants, that an individual is already gurang or old. With age more than 90, one is already gurangonon (very old).

Most of the time however, particularly when dates of birth could no longer be remembered, as in the case of some older people in the community, other ways could help to determine whether a person is considered older or not yet old. Compared to the number of years, these other ways are more explicit. Change in physical appearance that includes weakening and loosening of the skin as well as the appearance of ‘age lines’ or wrinkles not only in the face but also in the other parts of the body such as in arms and legs, is considered a sign of getting old. The hair also changes in colour. While pitch black is the natural hair colour among Asian youth, in old age it turns to white. People call it uban (white hair) and ubanon (full of white hair). The colour of hair however, could sometimes be misleading, according to them. With the presence of different beauty products that could change the colour of hair to a desired hue, this sign of growing old proves to be no longer dependable in determining the age of an individual.
One should also consider a weakening of the senses and a difficulty in remembering. The sense of sight as well as of hearing are also affected by old age. Some of them though, mentioned that usually, the loss or the weakening of the sense of sight is also compensated by a stronger sense of feeling and sensitivity. One of my informants for instance already had a difficulty in seeing but she could still recognize her grandchildren through their voice and their mannerisms. Growing old is also accompanied by weakening of the physical body. Physical characteristics such as having unsteady and trembling body and limbs, as well as unstable and faltering steps are some manifestations of growing old, according to my informants.

Still others would consider changes in the functioning as individual and as a member of the society. Inability to function as how jovem (young) people would is also considered a sign of old age. There are certain expectations of what an adult man or woman should be in the society. Adult men are expected to earn a living by working in the farm, fishing in the sea and also by doing other things that would earn them an income. Women on the other hand are expected to do household chores and other responsibilities of a mother such as tending to their young children and assisting the husband in earning a living. When an adult is no longer able to function as what is expected of him/her, aside from illness, old age could be a reason.

3.1.4 Older adults and their needs

Just like anybody else, older people have different needs. It is important to focus on these needs as these will spell out later the need for care as well as its different forms. The different needs of older people are satisfied through some strategies that they use and also though the provision of care by members of the family who look after the elderly. When somebody provides care, older people’s certain needs are catered to. They are relieved of some of their worries and pains and of their difficulties in life.

Basic biological needs according to my informants were generally referred to as the need to eat and survive. This includes the basic necessities in life such as several meals a day, something to cover and protect their body and give them comfort when it is too hot or too cold, as well as a place to stay where people care for and look after them.

Older people are more vulnerable to health problems, according to my informants. Becoming ill is another concern that older people are worried about. Everybody gets sick, they would often say, but older persons are more vulnerable and prone to illness because they are already physically weak, just like young children. All older adults I had a chance to talk to cited different kinds of illnesses that they have been experiencing. Some of the symptoms were bodily aches, skin irritations, body weakening, dizziness and recently, high blood pressure. Body weakening and dizziness are perceived as part of growing old, and so with bodily aches. They are however baffled with the idea that even though what they have in the community is basically a seafood diet since they are surrounded by the seas, many have already been experiencing high blood pressure. Most of them said that it is because of worries, anxiety and anger which are oftentimes kept within themselves.

Whenever they would get sick, some of them would self-medicate. They make use of herbal medicines available in the area and sometimes take over-the-counter medicines for ordinary illnesses such as colds, fever and cough. Others would try spiritual healing through prayers and meditations. Some of them however said that, when it is not serious and urgent, they would just suffer in silence. They do not want to add to the burden of their family members looking after them.
Difficulties that older encounter in getting through the day are also considered needs. Loneliness is one. It is the feeling of missing persons they were used to be with and things they were used to have. It is a kind of loneliness, with a tinge of longing for somebody, perhaps family members who are not, or no longer with them. There are times that they also use the word bored. That is why according to them, they would always want to do something, things that they could still do with their remaining body strength, just to keep their minds busy and avoid boredom and loneliness.

In order to beat boredom and loneliness, some of them said that they use a combination of spiritual and practical measures. They would often pray and contemplate and eventually they would feel better. Those who are not into spirituality said that they would usually resort to other things such as visiting their family members nearby, if they could still go around. Others just ignore their loneliness and boredom. These would eventually disappear anyway, according to some of them. Since they could not do away with loneliness, they said that they just had to contend with it. Some of them though had an antidote to boredom and loneliness. They would usually recall beautiful memories, hum a nice tune or go to the central part of the community where young children are happily playing and enjoying. By watching them, their homesickness, loneliness and boredom would subside, according to them.

3.2 Family as the primary source of care for older adults

What could be the reasons why the Filipino family is considered the primary source of care for older members? It is not possible to identify a Filipino without mentioning his family. Go (1992), in her review of researches on Filipino families mentioned that, ‘if one is to understand the Filipino family, it is important to understand who the Filipino consider as kin. The Filipino is characterized by a bilaterally extended kinship system which reckons descent from both the male and the female (Go, 1992). The interaction patterns within the Filipino kinship system, according to Go, ‘involve reciprocal duties and obligations’. Moreover, ‘the recognition of one’s close relatives also carries rights and privileges’ (Go, 1992). Though children are not explicitly required to support their parents, they feel that they are indebted to them for bringing them into life, so they are supposed to help them in any way they can.

This concern about the importance of the family has always been mentioned in my conversations with my informants from the community. Generally in the past according to them, older persons who were not able to marry and have children of their own were considered unfortunate. This need of having a family in order to have somebody to look after when they grow old has always been emphasized by them. They also said that caring of older persons is indeed a difficult task. Caregivers could get tired, impatient and overwhelmed with all the challenges of looking after an old person. One’s interest and drive to do tasks for them, and even to love them would certainly wane. Only a real child, according to them, would be able to sustain this feeling of love and drive to assist them in their needs.

3.2.1 Women: Preferred providers of different forms of care

An important aspect of care is the source of care or the care provider. In most cultures literature suggests, that women are almost always the source of care, particularly of older people. They could be wives, daughters, sisters and even daughters-in-law or other female relatives. Residents of this community are not different. Most of them also favour women to care for them when they grow old. Some variations however were noticed from my observations of and conversations with them. Both male and female elderly prefer natural (i.e., biological) children,
particularly daughters to care for them when they become old. This does not mean however that other possibilities were not thought of. As caregivers, while others could serve as alternatives, if given a choice older people in this community would still want they daughters to provide them body care and companionship. They said that females, specifically daughters and better yet, biological ones are desired because they are better providers of body and other forms of physical care. Also, they are the ones who are usually in a position to do those kinds of care activities.

Female family members, particularly daughters are described as better caregivers not only because they are more able to provide body care but because they are also more careful and watchful of others. This impression on females is best illustrated when some of my informants said that females are by nature good in rendering body care, just like what mothers do with their children. Adult female family members according to them, are usually more emotionally caring and patient, being mothers themselves or soon to be mothers. Females, particularly daughters are favoured as care providers because they are usually in a position to care, since they are expected to be at home most of the time while men are out in the sea fishing, in their farm or in other places earning a living.

3.2.2 To care is to be near: Activities of care

Could one really not care without being there? In my conversations with my informants, ‘provision of a place to stay’ has always been mentioned first, when asked about how to care for older people. Some other physical forms of care were also mentioned. These included feeding, bathing, escorting them when they want to go around, cleaning their place, throwing away their urine and other body wastes, and the like. Another way of caring is in the form of economic support which could be in cash or in kind. Very often I would hear from our conversations that although physical care is much preferred, decrepit or not, if that is not possible because the children are far away, then financial support would be acceptable. This kind of support could be by sending money for the parents’ basic needs (i.e., food and other needs in the house, rice and other foodstuff,) other material things that could be of utility to the parents.

In my conversations with my informants, physical and financial forms of care have always been mentioned but seldom the emotional ones. Perhaps it was because, compared with emotional ones, it was indeed easier to remember the most obvious activities of care that they engage in (in the case of the care givers), or that they receive, (in the case of the older people.). However, when I looked more deeply into what they had been saying about how they wanted to be cared for, I noticed that there were some quiet desires among them, for their children ‘to be concerned about’ them and ‘to think about’ them. Some more hidden forms of have also been mentioned. It is interesting to note however, that although being near does not always guarantee care, physical proximity is still an important requisite for care.

3.2.3 Care begets care: Motivations for caring

Among the three major aspects of care, it seems that the third--people’s motivations to care, is the least discussed in literature. From my discussions with and observations of older as well as younger people in the community, I learned that there are many different reasons for caring. Some of these are quite general while others could be considered more or less specific among these kinds of people, with this particular kind of culture.
Whenever informants would talk about their motives for caring, they would often start by mentioning something about love and respect, ‘in deference to and love of parents’, they would say. In this community, there were people who were still capable of showing care without any condition, without any prerequisite. The older people are their parents, they belong to a family so they love them. They were socialized that way. Since they love them, they care for them. There could also be a shade of pity in people’s reason to care. When they see their parents’ condition of being weak and needing assistance, they pity them, so they look after them. Another most mentioned motive for caring was a sense of gratitude which is very much related to an obligation. When asked about the prime motive for care of their older parents, caregivers would often mention that fact that it is their responsibility to help and look after their older parents.

Some people care for their older family members because it is morally correct and expected and that the consequences of doing this are blessings. Others would also refer to this as indulgencia (blessings and mercy from God). There could be different forms of blessing or things happening to you which are disguised as blessings. People could have a good life, a good fortune, a good family, good catch out in the sea, good grades in school meeting nice people and being in pleasant and safe situations and circumstances. While caring could be considered ‘Godly’, it is also ‘human’. Caring is human according to my informants because if you care for others, others would also care for you. In a sense there are some expectations but these are very implicit. Though coming from other persons, these good things that come upon them are still considered Godsend, and construed as a consequence of what one has done to others.

When one refuses to care however, what happens? Forgetting one’s parents and failure to care for them would result to not receiving blessings such as good fortune and a good life, according to them. Some suffer misfortunes while others are simply not cared for by their children or by other people. One would notice that just like in any culture, there are certain norms that everybody has to conform with. When one follows what is expected of him, one is rewarded. Rewards for looking after one’s parents could be as apparent as an outright care from other people or could also be disguised as blessings.

3.3 Caring for older adults: a re-definition

Different challenges experienced by the people in the community most particularly the migration of females known to be the preferred and actual caregivers to older members of the family, resulted to different changes that they have to contend and cope with in the care of older people. In order to cope with these changes, they have to reconcile ideals and realities of care. This entails a recognition that some features of the care arrangement are no longer feasible, so these should be altered and some adjustments are to be made.

3.3.1 Care by other family members: other alternatives

As what have been noted in earlier discussions, in this community, family is still the primary source of care for older people. There have been some modifications though. These transformations are not so much in the rationale behind family as the main source but rather in terms of its three major aspects: the source, the manner and the reasons why people care. In terms of the source of care, analysis of data suggests two major changes. The first one pertains to the gender of the carer, while the second one to the changes in the relationship between the carer and the cared for.
Whereas before, there was preference for females more specifically daughters as carers, during the field visits, older persons being cared for by sons and other male family members have been noted. There is a growing realization that male family members could also be a source not only of financial care but also of the other forms—physical and emotional. Men, particularly sons are also capable of doing so. There are also other alternatives in terms of relationships. As in the change in gender of carer, an important issue here is more on acceptance rather than on preference. Females, particularly daughters are still the preferred caregivers because of the reasons mentioned earlier. It seems however that there is a growing recognition and acceptance of other alternatives. This may not necessarily because of choice, nevertheless it is slowly becoming a main feature of the family as the main source of care. Whereas before, a spouse, if still alive, and biological daughters if there are any, are expected to care for their older parents, alternatives such as daughters-in-law and even grandchildren have come into the picture. It may be true that not all daughters-in-law are inclined to do this and not all grandchildren are willing to contribute, however, in every family, a potential like this is always present.

A consequence of this change in the kind of relationship between the carer and the cared for is also a change in the notion that since children are important source of care, people should marry in order to have somebody to care for them when they get old. Younger community residents have realized that since there are other alternatives in terms of the source of care, it is fine even when some people do not marry and have children. They are no longer pitied and considered unfortunate. There are other hopes for care when it is already their turn to be cared for. Other relatives such as siblings and siblings’ children could care for them.

3.3.2 Concept of care: One need not always be there in order to care

With some changes in the source particularly in the acceptance of sons, daughters-in-law as well as grandchildren as carers, are accompanying changes in the people’s concept of care as well as in the type of care given to older people.

In the past, caring for the elderly has always been defined or perceived as ‘looking after’ them and ‘attending to their needs’ which implicitly suggests body care and other forms of physical care. This emphasis in physical form of care in turn suggests that physical proximity or being with them or near them, is a requisite for care. Just as what some informants mentioned: ‘how could you care without being there?’ Now, one could already hear older people saying, ‘yes, they care for me. From time to time, my children would send me money and goods, sometimes mails, that’s still caring. I understand their difficulty in coming and visiting me, because they need to be in other places to work. If they would not do that, they would not be able to support themselves and us.’

Whereas before, the common line would be, ‘how could you care if you are not there?’ Now, it is already, ‘You don’t always have to be together in order to care, or to show that you care, there are other ways.’ Family members working and staying in places other than the island can continue caring for their elderly. Carers living in other areas in the community, not necessarily in the older people’s homes, and even those in other municipalities and provinces nearby could still continue providing care.

Whereas before, activities of care were characterized as more physical and therefore more obvious, now it could be said that there is an increasing recognition of economic assistance in the form of cash or kind, as a form of care. This is usually labelled as remittance.
An accompanying change however of this innovation in terms of the manner in providing care is that while the more obvious forms are even more emphasized, the more covert ones such as some forms of emotional care, are more and more hidden or even neglected. People have become more concerned about finding ways on how to send more financial support to their family members left in the community. As a result, they find very little time to attend to activities that would somehow take the place of being physically there, activities such as sending mails, phone calls and the like. In their desire to send more material care, they sacrifice the need to provide more emotional ones.

3.3.3 Motivations for caring: Tangible motives, tangible outcomes

A major change in terms of the incentives or motives for caring has also become apparent. Incentives for caring have become more practical and tangible.

As seen in how people talk about motives, it is apparent that people care for their elderly because of some moral obligations and societal expectations. People’s reasons for caring, covert as they are, still pinpoint to a sense of gratitude. However, it is also important to take into account the meanings suggested by the other motives mentioned. If one is to look at these more closely, particularly those mentioned by the caregivers, it is more of practicality, more of mutual reciprocity. This kind of practicality and some form of mutual expectations become obvious when informants said that caring for her ageing mother in the presence of her own children would certainly have an advantage for her and her husband because if their children would see what they were doing with their elderly parents, they could also be doing it to them in the future.

On the part of women with children left in the care of their grandparents, the motive is quite clear. They provide economic support to their parents in the community because their children are with the older parents. Support now goes not only and not primarily to the parents but to the children. The older parents this time, become conduits and they also benefit. The benefits however require some form of investment in the form of care, this time not to the older people but by the older people. They look after their grandchildren, not only because they want to but also because they have to. Caring for others is also a form of caring for oneself. Motives become clear and tangible. People look after others because they wanted and they expect others to look after them. Care here is expected to come not in the future when they get old, but also at present when they are in need of care.

Hand in hand with motives becoming more practical and tangible, outcomes have also become more utilitarian and realistic. Women with children who need to earn more transfer to the city to work. Instead of paying somebody to look after their children, they would just leave them to the care of their parents. When they send financial support, they would be ‘killing two birds with a single stone’. They are able to support both their children and their parents. Still, they could maintain the closeness in their parent-child relationship through their support and through their children’s presence.

Sometimes, married children would also invite their elderly parents to stay with them for a period of time, in the city. Just like in earlier situation, younger children could be left in the care of these older parents living with them. Instead of having a ‘paid’ nanny, they take advantage of their older parents’ presence and assistance.

Other outcomes have also become clearer. Married daughters working in the city would usually visit the community not only because of the older parents but also and most especially because of the children left in the care of their parents. These married daughters are concerned about the
‘family’s welfare and condition, not only because of the older parents but also and perhaps primarily because of the children. While older parents are aware of this, they do not look at this in the same way. When daughters visit, they are happy. Whoever they are really visiting does not matter. What matter is that they visit. When a daughter sends financial support, it does not matter who the incentive is, what is important is that she sends support. In this circumstance, whatever reaches the children also benefits the elderly parents.

To summarize, the exodus of younger people particularly females to urban areas, created different changes in people’s notion of care of older people. There were also accompanying changes in the three major aspects of care. Whereas before, females particularly daughters were the preferred caregivers, in recent years, other alternatives become more acceptable. Daughters-in-law, grandchildren, and even men belong to these alternatives. Whereas before, it was impossible to care without being near, in recent years, physical proximity is no longer necessary. There is already a growing acceptance of financial support as a form of care rather than purely physical where the physical presence of the caregiver is required. In terms of the reasons for caring, recognition of a more reciprocal motive for caring is now being slowly integrated into the usual respect and sense of gratitude orientation explaining why people care.

4. CONCLUSION

Ageing is an unavoidable part of life. Care is essential to ageing. Change is a normal feature of care, and coping is a vital response to change. All these things are expected to happen to every individual’s life. It is a given reality. While care arrangement for older people that involves the family unit is still the most common in the Philippines particularly in the rural areas and specifically the family remains to be the primary source of care for the elderly, younger people’s flight to the cities in search of better income brings about various challenges to the major aspects of caring for older adult members of the family. People have to contend with these changes and they are able to cope through a re-definition of it.

A form of coping is re-defining care into a form that will make it more fitting to the changing times. One that is characterized not only by its customary physical form that requires people to be near in order to care, but also by a new structure that allows family members to provide care even when they are far away. In terms of the participants in care, recasting involves an identification of family members other than children, as providers of body care, financial support and different types of emotional care. In this new form, sons, daughters-in-law and grandchildren come into the picture of caring of older people. Recasting also requires an acknowledgement that there are other reasons for caring which are beyond the usual respect and sense of gratitude rationale. Re-defining results to a recognition of reasons which are more practical. Although often unsaid, in this recast form, the carer’s purpose of caring are complementary with those of the cared for and vice versa. People care because they are cared for. People provide support because in the process, they also receive support.

In the process of re-defining, other changes become more apparent. This changing pattern is expected to continue as certain factors continue to bear upon this care arrangement. As a result, people would continue to adopt more effective ways in order to adapt to new situations and to the demands of a very dynamic world.

5. ACKNOWLEDGEMENT
I would like to express my deep gratitude to the residents of this community in the southern part of Luzon area in the Philippines for always welcoming me into their families, their community and their lives whenever I would come and visit as a researcher and as a friend. I would also want to thank my study informants—the older adults and their family members who are looking after them, for sharing with me their stories and their lives.
THE EFFECT OF RESIDENTIAL FEASIBILITY AND SOCIAL PROTECTION PROGRAM ON HOUSEHOLD HEALTH STATUS IN DKI JAKARTA 2015

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ABSTRACT
Housing development is one of national development in order to improve the quality and prosperity of people and society, with the hope that all the people of Indonesia can occupy a decent, healthy and quality house. Housing conditions can be one measure of living standards, civilization, and personality that affect the development of individual character, health status and household welfare. Housing condition can be measured with degree of residence feasibility with indicator of decent water, proper sanitation, sufficient living area and other house facilities that fulfill health and aesthetic requirement so that it can give comfortable atmosphere for its occupants.

The purpose of this research is to know the effect of residential feasibility and social protection program on household health status in DKI Jakarta 2015. Besides, this research is expected to depict general condition of housing and public health status in DKI Jakarta. Sources of research data using National Socio-Economic Survey in 2015 at DKI Jakarta. The research method used is descriptive analysis and path analysis to describe variable of residential feasibility, social protection program, and household health status.

Various factors can affect the degree of eligibility both internal and external. In this study the main factors affecting the residential feasibility are the ownership of social protection programs and demographic characteristics of households as control variable. Furthermore, the variable of residential feasibility and social protection program has implication to household health status which is explained by morbidity rate of household.

Keywords: decent water, proper sanitation, sufficient living area, social protection, morbidity rate.

Introduction
Health is one of the vital aspects in people's lives and become one of the measure of the nation's welfare because health aspect is one of the dimensions of the human development index.
Household health status is influenced by various factors influencing both from external factor and internal factor of the household itself. According to H.L Blum (1974), there are 4 factors that influence health status among others, environmental factors, behavioral factors, health care factors and genetic factors.

DKI Jakarta as the capital city of Indonesia is a megapolitan city whose standard of living is relatively higher compared to other provinces. As one of the economic centers of Indonesia, DKI Jakarta has an attraction for people to seek livelihood in the capital. This condition triggers the density of settlements in DKI Jakarta which is likely to affect the degree of residential feasibility so that it can have implications on the health status of the community. In this study, indicators of residential feasibility consist the quality of improved drinking water, proper sanitation and sufficient living area.

The higher the morbidity, indicating an increasingly poor public health status. Conversely, if morbidity is lower, it indicates that the health of the population is getting better. According to Hapsari, et.al. (2009) study, poor health status is more at risk for people with low levels of education, living in rural areas, and not living in a healthy environment. Hapsar, et.al affirms people lived in unhealthy environment (including water, sanitation, crowding and solid waste) were 1.1 times more likely to have bad status health.

Nsiah- Gyabaah (2004) examines that the unhealthy environment and overcrowded housing in the slums of cities in developing countries expose the urban poor to high rates of infectious diseases such as pneumonia, tuberculosis and diarrhea. Prince Osei-Wusu Adjei and Peter Ohene Kyei (2013) have study that examines how the relationship between income, home quality and incidence of diseases in rural Ghana with a sample of 306 households from 9 areas in Amansie West District. The results showed there was a positive correlation between the inappropriate house and the low health status in Ghana.

The results study by Bonnefoy et.al. (2003) affirm that the level of self-assessed health status determine directly on the type of building, the sound insulation of the flat (including noise from a neighboring flat), the indoor air quality, the amount of natural light, energy consumption, and temperature problems in winter. People who claimed that they got sick more easily than others ascribed more importance to their immediate environment, the layout of their flat, hygiene and sanitation conditions, and the risks of accidents.

Arno (2011) had a study link between Social Security and health status among the elderly would add a significant and missing dimension to the public discourse over the future of Social Security, and the potential role of income support programs in reducing health-related socioeconomic disparities and improving population health. Bhattacharya (2002) observed the value of medicare benefit for social security Disability Insurance (DI) recipients indings regarding morbidity of DI applicants and non-applicants confirm the obvious fact that DI applicants are in poor health relative to non-applicants.

Methods
This study uses data from National Socio-Economic Survey 2016 in DKI Jakarta using 4,786 sample households. The analysis unit of this study is household at DKI Jakarta in 2015. Analysis methods use descriptive analysis and path analysis for inferential analysis. In order to generate path analysis, this study uses general structural equation model with STATA 13 statistical software. The main variables determine health status are decent water, proper sanitation, sufficient living area, health insurance and Social Protection Card or Welfare Family Card (Kartu Perlindungan Sosial (KPS) or Kartu Keluarga Sejahtera (KKS)).

Water is one of the main living necessities for living things. The need of drinking water is not only seen from its quantity but also of water quality. According to Minister of Health Regulation No. 492 / Menkes / Per / IV / 2010 about the quality requirements of drinking water, drinking water is said to be safe for health when it meets the physics, microbiological, chemical and radioactive requirements loaded in mandatory parameters and additional parameters. Availability of toilet facility in the house is an indication of good and health sanitary condition. In terms of environmental health, disposal of human waste without good sanitary system will pollute and harm the environment and surroundings, especially land and water resources. Sufficient living area is considered to provide a sufficient living area for the household members also called per capita house area that is obtained from the calculation of the width of the house divided by the number of family members. The house is categorized as sufficient if the per capita house area is more than 7.2 m^2 (Badan Pusat Statistik (BPS – Statistics Indonesia)).

In addition to environmental factors, public health status can also be affected by access to health-care services and the utilization of social protection programs. In this study the ownership of social protection programs is limited by programs directly related to health, namely health insurance and Social Protection Card or Welfare Family Card (Kartu Perlindungan Sosial (KPS) or Kartu Keluarga Sejahtera (KKS)). In general, people who have health insurance and social security (KPS/KKS) tend to have better health status, because of the ease of accessing health-care services. Social Protection Card (Kartu Perlindungan Sosial / KPS) is a card issued by the government in the context of the implementation of the Program Acceleration and Expansion of Protection Social (Program Percepatan dan Perluasan Perlindungan Sosial (P4S)) and Bantuan Langsung pengganti Subsidi Minyak (BLSM) in 2013. In 2015, gradually KPS changes to be KKS that will have more or less functions same with KPS but with various format and additional changes information within the card to facilitate the newly formed government to channel social assistance (Badan Pusat Staistik (BPS – Statistics Indonesia)).

Health status is formed from the condition of physical health, mental health and social health of the community. In this study the health status under study was limited to only physical health. Physical health manifests when a person does not feel sick and does not clinically show symptoms of pain. Public health status can be assessed based on the achievement of life expectancy, morbidity and mortality rate. The indicator used to measure household health status
in this study is the morbidity obtained from the percentage of sick household members divided by the number of household members.

According to the concept applied by the BPS-Statistics Indonesia, health complaints discussed here are those that disrupt all daily activities (working, attending school, housekeeping and other kinds of activities). The complaints refer to some common disease symptoms such as fever, cough, runny nose, asthma/short breath, diarrhea, recurrent headache, toothache, measles, ear watery, jaundice/liver disease, seizures, paralysis, dementia, etc. during the last month. The higher the morbidity rate means the greater the number of population with health problems. The greater the number of people experiencing health problems means the lower the level of health in the area and the higher the morbidity rate in the area (BPS-Statistics Indonesia, 2016).

Generate model in this study:
First path:
Residential feasibility = b1age + b2job status + b3education + b4member + b5exp.cap

Second path:
Social protection program = b1age + b2job status + b3education + b4member + b5exp.cap

Third path:
Morbidity rate = b1age + b2job status + b3education + b4member + b5exp.cap + b6sanitation + b7water + b8sufficient + b9health insurance + b10KPS/KKS

Figure 1. Framework Study
Results

In this section content an examination describe residential feasibility and social protection program as main observed variables and characteristics of households as control variables that impact household status as an outcome variables.

3.1 Descriptive Analysis

![Image of percentage of household by main variable in DKI Jakarta, 2015](image)

Figure 2. Percentage of household by main variable in DKI Jakarta, 2015
Source: Susenas 2016, Author’s calculation

Based on the results of data processing Susenas 2015 in DKI Jakarta, the characteristics of households in DKI dominated by heads of households aged 35-55 years (53.6 percent), the level of middle education (junior high school and high school) about 58.4 percent, working status (83.7 percent), had household members of 1-4 people (71.6 percent) and had an average per capita expenditure above the poverty line (97.0 percent).

Table1. Distribution Percentage of Household Morbidity Rate in DKI Jakarta 2015

<table>
<thead>
<tr>
<th>Variables</th>
<th>Morbidity Rate</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1-25</td>
</tr>
<tr>
<td>Age Group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 – 34</td>
<td>16.0</td>
<td>2.2</td>
</tr>
<tr>
<td>35 – 55</td>
<td>32.6</td>
<td>9.1</td>
</tr>
<tr>
<td>&gt; 55</td>
<td>12.7</td>
<td>3.4</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>12.6</td>
<td>2.6</td>
</tr>
</tbody>
</table>
The residential feasibility in DKI Jakarta is good compared to other regions in Indonesia. By 2015 households in DKI Jakarta who already have adequate drinking water are 93.4 percent and proper sanitation is 89.3 percent. Meanwhile, sufficient living area in DKI Jakarta which is classified as unsufficient (29.7 percent) because of the population in DKI Jakarta is very densely populated.

Households with health insurance in DKI Jakarta in 2015 recorded 67.5 percent. Nevertheless, there are still many households in DKI Jakarta who do not have health insurance that is as much as 32.5 percent. While households that have *KPS/KKS* in Jakarta as much as 8.3 percent. It

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<table>
<thead>
<tr>
<th>Job status</th>
<th>Middle</th>
<th>High</th>
<th>Jobless</th>
<th>Work</th>
<th>Total of member household</th>
<th>Average Expenditure Per capita</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>35.5</td>
<td>13.2</td>
<td>9.4</td>
<td>51.9</td>
<td>1 – 4</td>
<td>Upper PL*)</td>
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<td>2.6</td>
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<td>6.4</td>
<td>59.6</td>
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<td>71.6</td>
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<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100%</td>
<td></td>
<td>100%</td>
<td></td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

*) Poverty Line DKI Jakarta 2015 = Rp 487.388 per kapita

Source: Susenas 2016, Author’s calculation
indicates that the economic life status of households in DKI Jakarta is relatively better than other regions in Indonesia.

Figure 3. Morbidity Rate of Household in DKI Jakarta, 2015
Source: Susenas 2016, Author’s calculation

Inferential Analysis
The result of path analysis in this study shows the effect of predictor / exogen variable that is household characteristics variable to residential feasibility variable and social protection program variable as endogen dependent variable. The next path analysis is the main variable of residential feasibility and social protection program variables that influence the variable household health status (morbidity rate) controlled by household characteristics variable.

Table 2. Goodness of Fit Test Model

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
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<td>10</td>
<td>6678.740</td>
<td>9.538</td>
<td>.000a</td>
</tr>
<tr>
<td>Residual</td>
<td>3371648.962</td>
<td>4815</td>
<td>700.239</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3438436.364</td>
<td>4825</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: morbidity rate
b. Predictors: (Constant), kartu perlindungan sosial/kartu keluarga sejahtera, Job.Status, improved drinking water, number of member household, proper sanitation, Rata-rata Pengeluaran Perkapita Sebulan, health.insu, Sufficient living area, education, age
Goodness of test indicates that all variables in this model is significant, it can be known with p-value is 0.000 less than 0.05. Meanwhile, to know significant model each variable as partial depend other variables are ceteris paribus describe in next table 3 – 5.

### Table 3. Statistics Result of Variables

| Variables                  | Coef.  | Std. Err. | z     | P>|z| | [95% Conf. Interval] |
|----------------------------|--------|-----------|-------|-----|----------------------|
| (1)                        | (2)    | (3)       | (4)   | (5) | (6)                   | (7)               |
| **Decent Water**           |        |           |       |     |                      |                   |
| Age                       | 0.015  | 0.005     | 2.740 | 0.006 | 0.004               | 0.025             |
| Education                 | 0.026  | 0.100     | 0.260 | 0.795 | -0.170              | 0.222             |
| Job status                | -0.002 | 0.167     | -0.010| 0.990 | -0.328              | 0.324             |
| Total of member household | -0.026 | 0.036     | -0.720| 0.472 | -0.098              | 0.045             |
| **Expenditure per capita**| 0.000  | 0.000     | -3.790| 0.000 | 0.000               | 0.000             |
| **Constanta**             | -2.928 | 0.385     | -7.610| 0.000 | -3.682              | -2.174            |
| **Proper Sanitation**     |        |           |       |     |                      |                   |
| Age                       | 0.005  | 0.004     | 1.310 | 0.192 | -0.003              | 0.014             |
| Education                 | 0.531  | 0.082     | 6.450 | 0.000 | 0.370               | 0.692             |
| Job status                | 0.109  | 0.136     | 0.810 | 0.420 | -0.156              | 0.375             |
| Total of member household | -0.052 | 0.030     | -1.760| 0.078 | -0.110              | 0.006             |
| **Expenditure per capita**| 0.000  | 0.000     | -5.350| 0.000 | 0.000               | 0.000             |
| **Constanta**             | -2.374 | 0.308     | -7.720| 0.000 | -2.977              | -1.771            |
| **Sufficient Living Area**|        |           |       |     |                      |                   |
| Age                       | -0.052 | 0.004     | -13.830| 0.000 | -0.059              | -0.044            |
| Education                 | 0.513  | 0.069     | 7.400 | 0.000 | 0.377               | 0.649             |
| Job status                | 0.256  | 0.125     | 2.050 | 0.041 | 0.011               | 0.502             |
| Total of member household | 0.084  | 0.025     | 3.310 | 0.001 | 0.034               | 0.134             |
| **Expenditure per capita**| 0.000  | 0.000     | -16.390| 0.000 | 0.000               | 0.000             |
| Variables                        | Coef. | Std. Err. | z     | P>|z| | [95% Conf. Interval] |
|----------------------------------|-------|-----------|-------|-----|----------------------|
| (1)                              | (2)   | (3)       | (4)   | (5) | (6)                  |

**Constanta**

Health Insurance

<p>| | | | | | | |</p>
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<tr>
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<tbody>
<tr>
<td>Age</td>
<td>0.021</td>
<td>0.003</td>
<td>7.000</td>
<td>0.000</td>
<td>0.015</td>
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<td>-0.369</td>
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<td>Total of member household</td>
<td>0.213</td>
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<td>9.520</td>
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<td>0.169</td>
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<tr>
<td>Expenditure per capita</td>
<td>0.000</td>
<td>0.000</td>
<td>3.010</td>
<td>0.003</td>
<td>0.000</td>
<td>0.000</td>
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<td>Constanta</td>
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<td>0.209</td>
<td>-1.820</td>
<td>0.069</td>
<td>-0.787</td>
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</tr>
</tbody>
</table>

*Continue to next page*

**Continue table**

| Variables                        | Coef. | Std. Err. | z     | P>|z| | [95% Conf. Interval] |
|----------------------------------|-------|-----------|-------|-----|----------------------|
| (1)                              | (2)   | (3)       | (4)   | (5) | (6)                  |

**KPS/KKS**

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<table>
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</thead>
<tbody>
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<td>0.005</td>
<td>1.070</td>
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<td>0.000</td>
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<tr>
<td>Total of member household</td>
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<td>0.031</td>
<td>4.330</td>
<td>0.000</td>
<td>0.073</td>
<td>0.193</td>
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<td>Expenditure per capita</td>
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<td>-6.170</td>
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<td>0.000</td>
<td>0.000</td>
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<td>-10.690</td>
<td>0.000</td>
<td>-4.524</td>
<td>-3.121</td>
</tr>
</tbody>
</table>

**Morbidity Rate**

<p>| | | | | | | |</p>
<table>
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<tr>
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<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-0.016</td>
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<td>-0.450</td>
<td>0.655</td>
<td>-0.085</td>
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<td>Education</td>
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<td>3.300</td>
<td>0.001</td>
<td>0.877</td>
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<td>Job status</td>
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<td>0.009</td>
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<td>Total of member household</td>
<td>-1.398</td>
<td>0.241</td>
<td>-5.790</td>
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<td>Expenditure per capita</td>
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</tr>
<tr>
<td>Decent Water</td>
<td>1.328</td>
<td>1.221</td>
<td>1.090</td>
<td>0.277</td>
<td>-1.065</td>
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<tr>
<td>Proper Sanitation</td>
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<td>0.946</td>
<td>2.460</td>
<td>0.014</td>
<td>0.477</td>
<td>4.184</td>
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<tr>
<td>Sufficient Living Area</td>
<td>2.773</td>
<td>0.872</td>
<td>3.180</td>
<td>0.001</td>
<td>1.064</td>
<td>4.482</td>
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<tr>
<td>Health Insurance</td>
<td>1.852</td>
<td>1.361</td>
<td>1.360</td>
<td>0.174</td>
<td>-0.816</td>
<td>4.519</td>
</tr>
<tr>
<td>KPS.KS</td>
<td>21.017</td>
<td>2.484</td>
<td>8.460</td>
<td>0.000</td>
<td>16.149</td>
<td>25.885</td>
</tr>
<tr>
<td>Constanta</td>
<td>698.6426</td>
<td>698.643</td>
<td>14.223</td>
<td>671.316</td>
<td>727.082</td>
<td></td>
</tr>
</tbody>
</table>

Numerik variables: morbidity rate, age, total of member household
Categorical variables: education, job status, decent water, proper sanitation, sufficient living area, health insurance and KPS.KKS
Significant variables using bold text

First path is the effect of variables characteristic of household to residential feasibility consist decent water, proper sanitation and sufficient living area. The significant variables for those variables are decent water (age and expenditure per capita), proper sanitation (education and expenditure per capita) and sufficient living area (age, education, job status, total of member household and expenditure per capita). Second path is the effect of variables characteristic of household to social protection program consist health insurance and KPS/KKS. The result shown that all of characteristic variable impact health insurance are significant. While, the significant variables in KPS/KKS are education, total of member household and expenditure per capita.

And the last path in this study is household health status as outcome variables that be impacted by variables residential feasibility and social protection program as main predictor variables and variables of characteristic household as control variables. Almost all predictor variables are significant, exclude age, proper sanitation and KPS/KKS. The direction of coefficient regression variables means positif and negatif impact to morbidity rate. If coefficient value is positif, it means that predictors and respon variable have same direction. The predictor variables that have positif effect are level of education, expenditure per capita, proper sanitation, sufficient living area, health insurance and KPS/KKS. Further more, age, job status, total of member household and decent water have negatif effect for household morbidity rate.

**Discussion**
Main predictor variables that significant to effect household morbidity rate in DKI Jakarta 2015 are decent water, sufficient living area and health insurance, others main variables such as proper sanitation and KPS/KKS not significant at 95 percent level. Coefficient of decent water have negatif effect to morbidity rate, its mean that increase decent water have negatif effect or decrease the morbidity rate of household in DKI Jakarta 2015, that is match with hyphothesis. Meanwhile the sufficient living area and health insurance have positive effect to morbidity rate,
that mean household more likely increase morbidity rate of household although the percentage of morbidity rate zero relatively high in sufficient household and use the health insurance.

Limitation in this study is measurement of respond/outcome variable to describe health status only morbidity rate of household. Another variables to indicate status health are duration of illness, choices of medical care, mental health etc. However, the intervening variable that determine status health not only from housing/residential and social protection program, but also it can determined by behaviour such as smoking activity, physical activity, dietary health and genetic factor that are not include in this study.

Conclusion
The study confirms findings in the existing literature of residential feasibility and social protection program have directly and directly determine status health.However, other factors such as levels of education and the job status of heads of household, total of member and expenditure in the study area also play a significant role in determining morbidity rate as indicator of status health.

Households living in inhabitable housing are more likely get a higher incidence and severity of the most prevalent environmentally related diseases due to poor safety and security in their housing. Thus, efforts to towards achieving the Sustainable Development Goals should aim at improving the residential conditions and provide social protection program to access health service for whole people. Besides that, the facilities of medical care need to be improved.

References


WOMAN EMANCIPATION AND TATINI DAS (GUPTA): A BRAHMO LADY IN EARLY 20TH CENTURY BENGAL, INDIA

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ABSTRACT

The life of Tatini Das (Gupta) is of the eminent Bengali women educationists in undivided Bengal. She was an erudite scholar and became the Principal of Bethune College (1934-1950), a famous women college in Kolkata, India. Her Brahmo family had a liberal outlook. Tatini was inspired by the Brahmo ideology of gender equality. With the support of her father Shyamacharan Gupta, the headmaster of Bethune Collegiate School, she excelled in the board examinations. After completing graduation, she herself decided to marry her equally brilliant classmate Saroj Kumar Das following simple Brahmo rituals in 1919. In 1924, she appeared in M.A. examination in University of Calcutta and obtained 79% marks, ranking first class second in the university. During her stay in London (1927-1929), she completed a course on education system and taught in three institutions in London. After coming back to India, she presented her two research papers: first one in the Philosophical Congress in Lahore (1929); the second one in the Mysore Philosophical Congress (1932). In 1930, she established an institution to give free education and shelter to the poor girls. In 1932, she joined Bethune College in Kolkata, India as a lecturer in Philosophy and in 1934, she became the Principal of that College for 17 years. The college reached its golden period because of her administrative efficiency and cultural activities. Tatini executed firm upright personality and non-communal attitude in colonial India. She realized that the 19th Century British India had changed the pattern of a woman’s life; the concept of a perfect woman was going to be redefined. Being a good housewife and a mother of three sons, she had the desire to prove her academic and intellectual ability in the outside world, which she did successfully.

Keywords: Women emancipation, Bengal, Education, academic.

In the 19th and 20th centuries the political administrative economic and ideological changes in the Indian society raised some fundamental questions, women study and to some extent women empowerment are some of them. In the new perception their status and role in the society needed to be defined, specially in case of gender equality.

Issues concerning them were now considered as critical for the advancement of a developing country. The fact cannot be denied that only an educated woman is the just citizen who can assert herself in every sphere of life consciously, can do constructive works, can protest
and fight against adversities. Her completeness is necessary for every country’s enrichment. This type of thinking sow the seeds and as time passed gradually helped the blooming of a Tatini Das.

In this period the urgency of the matter is felt when with the advent of the British power India faced the modern West with its all-round advancement. Technological improvement for the innovations of Industrial Revolution and the new ideas of equality, liberty, rationality the product of French Revolution of the late 18th century penetrated Indian society along with West. The vastness of the word ‘equality’ ultimately began to be concerned with women also. India with its hierarchical society based on caste and gender realized the burden of illiterate woman as a waste of human resource to obtain modernity. So from many corners demands were coming for equality of women, moreover educated women and their valuable social participation.

Mrs. Tatini Das (Gupta) was the seventh Principal of Bethune College, Kolkata – the first College for women in modern India. She was first appointed as a lecturer in Philosophy on 2nd July, 1932 and in early 1934 became the principal for seventeen years upto December 1950 as an erudite scholar. Some of the cardinal points of this magnetic personality have inspired me to do this work placing her amidst the process of transformation of the century. My sources are mainly unused primary documents because still no book is written on her. They are (a) her official documents preserved in the Bethune College Archive (b) her family documents as diary, letters, photos and (c) interviews of the persons close to her (like her two sons)

My discussion will be divided in two parts. First, the influence of Brahmo religion on female education in Bengal in the 19th and 20th centuries and second, the life and career of Tatini Das in whom the effect of all these was personified and led to the emancipation of women as a whole.

A brief history of female education in India from the early Vedic period to the introduction of Brahmo religion in the early 19th century is here described as a background. The original fountainhead of Brahmoism is a synthesis of the Vedas, the Upanishads and Vedanta. This religion is connected with women emancipation as its essence is equality of all being as the children of ‘One’ that is ‘Brahmo’. So with it’s effect women began to be treated as human beings as free as men and got back that liberty which they have lost ages before.

The most ancient literature of our country are Vedas and the ideas and practices recorded here have influenced and guided our lives through ages. The earliest Veda is Rig Veda. (Though there are differences of opinion of the period of its writing probably it was written from 12th century B.C. to the end of the 10th century or early 9th century.) Though the Aryan society was patriarchal yet we have the names of several famous learned female Rishis who wrote slokas. The Aryan understood the moral value of a wife and the sacred dignity of marriage and family. The importance of women is evident by their essential presence in the outside yagnas by the side of their husbands and their inside authority over family matters. The society permitted them the necessary education by Gurus for their versatile roles specially in case of religious functions. Thus they were competent to compose verses – divine and lyrical and utter mantras during
spiritual functions which they also conducted. They had to learn the 11 types of forms of pronouncing Vedas.

But the situation changed in the later period. Here I refer to two slokas which will show the transformation of the social position of women in two ages.

“Usho Yati Swasarasya Patni” (Rigveda – sloka 1/115/2). In the early phase of Rigveda ‘Usha’ is described as the beloved wife of Surya who is going ahead of her husband (Surya) – a proud and self-assured image of woman. It is to be noted that Usha – the dawn is the first rays of divine consciousness. And in the age of Brahmya literature wife is mentioned only as her husband’s follower. “Striyah Pungsohanubartmano Bhabuka” (Shatapatha Brahmana, sloka 13/2/24). Not only the social position, her right to be educated or to be trained in any art form was lost.

There is a sloka in ‘Manusmriti’ which is claimed as written by Manu (Ref. Veda Vol 1-prelude) – “Purakalpe Kumarinang Mounjibandhami – shyate Adhyapanang cha Vedanang Sabitribachnong Tatha” – thus Manu himself admitted that in early days unmarried women had the right of Mounjibandhan (upanayan), right of teaching and to utter Savitri mantra. Thus it means that after having the right of the sacred thread or ‘upabhit’ she was entitled to be educated and to go through the Vedas. In Sanskrit language we have the word ‘Achrayaa’ meaning a lady teacher who earned money by adopting teaching as a profession.

Change came in later Vedic period because by then the society was divided in four varnas of which the most privileged caste was the Brahmin. Only he wore the sacred thread and his duties were to teach, to learn and to perform yagnas and pujas. Thus a learned woman became a challenge to his supremacy and a threat to his bread, because that was his only source of earning as he was in no sense related with the production system through physical labour.

So the later slokas written mostly by the male Brahmins and Rishis deprived women of all other rights among which the most vital was the right to learn. Manu abolished the practice of upanayana for women. Thus an ignorant and illiterate women naturally became economically dependent on a man and became his varya. Thus her existence now depended on her physical labour, nobody bothered about her intellect.

Manu code laid down the basic frame work for a hierarchical caste structure of Hindu society. He declared “Balye Piturbase Tishthet Panigrahasya Yaubane Putranang Bhartari Prete Na Bhajet Stri Swantram” So now a woman is never free throughout her life from childhood to old age; in a man dominated society an illiterate woman being deprived of property rights is a subordinate of her father, husband and son being confined behind the doors. For the loss of economic freedom she had to accept the social bondage and humiliation for mere living. Thus in a yagna oriented vedic society an illiterate woman lost her validity and was married off in her childhood. Thus she forgot the fact that in ancient India a woman like her-Brahmachari Gargi remained an unmarried scholar, wrote many mantras of Veda and challenged men supremacy by interrogating the ‘Shrestha Brohmobid’ Yagnabalka in the open court of king Janak about ‘Brohmo.’ Her knowledge was her confidence. Or a women like Maitrayee who refused property and declared ‘Yenahang Namrita Sang Kimahang Ten Kuryam’ that is-what shall I do with that which will not give me Amaratya. ‘Asatoma Sadgamao, Tamasoma
Yotirgamao Mriyormahmritangamao – Take me away from ‘Asatya’ (untruth) to ‘Truth’; form ‘Tamasa (darkness) to light (Joyti); from death (Mrityu) to ‘Amrita’ and she discussed deep philosophical and metaphysical problems with her husband Yagnabalka. She was the lone female searcher of Amrita in ancient India and her words became the daily prayer mantra of the Brahmos in the 19th century. Gargi was a scholar no less than Yagnyabalka – the greatest scholar of his time. The voices of women of scholastic aptitude were not heard again because society had forced women to remain illiterate and numb for centuries.

We again heard the voices of women of theris’ in the Pali book ‘Therigatha’ in 6th to 7th century B. C. from the Buddhist period. The Bouddha Theris were educated, had separate identities and had the right to choose the life of celibacy to become an ‘Arhat’. The 6th century B. C. is regarded as an age of Religion and philosophical upsurge, anti – Brahminical in character.

Situation changed in the caste based Brahmyanya period; the reference of woman were no where as a separate entity in the age of Sutras and Dhramasastras from 600 B. C. to 1000 A. D. In which we find the names of Sutrakars like Panini, Gautama, Baudhyana, Kautilya, Vasistha, Manu etc. (though Manu’s exact date is controversial) Manusmriti played a very important role in every step of Hindu life during the last 2000 years in which the predominance of Bhrahanical order and supremacy of high-caste males is highlighted. Naturally it affected female rights from every angle.

The next Classical age shows the tendencies of both progress and conservation represented by Yagnabalka, Parasar, Narada, Vyasa etc. Now rights of women in property as ‘Stridhan’ was admitted.

Next came what may be called the Age of Decline. It started after the death of king Harshabardhan in 647 AD when a tripartite struggle among Eastern, Western and Southern Indian dynasties went on for 200 years. The struggle for power among feudal lords led to the decline of feudal values. Which caused setback of women’s position in general.

From the 19th century with the introduction of Western education female enlightenment theory also got importance in colonial India and the question of female education got priority. Men like Rammohan and Vidyasagar’s eagerness in this matter reveals the urgency of women emancipation from every side. The School Book Society and the Missionaries took the first initiative in this matter but they failed due to caste based Hindu orthodox society. But gradually female education became a widespread movement with the rise of the Brahmos who hit at the root of the age old religious feudal structure themselves disbeliever of caste rigidity and believer of gender equality.

Rammohan Roy was the pioneer in the matter of the change in the socio religious setup which led to the introduction of the new religion the Brahmoism. Realising the socio-economic problems of colonial India he did reforms without hurting the class interest of zamindars like him – The beneficiaries of Companies Permanent Settlement of 1793. But his overall contribution specially in case of female education cannot be ignored. He realised the importance of Veda in our culture and translated five Upanishads like Ken, Isho, Kattho, Mundak and Mandukya in Bengali. It provided the base of a religious theory and thus it became the foundation stone of Brahmodharma an anti-idolatrons religion. He revived the idea of Vedanta – the theory of Advita (absolute non-duality) that the world contains no other reality except God –
Brohmo who is ‘nirakar’; and from this Father all men and women are born as his part. Automatically the existence of women as a separate being is accepted in Brahmo conception. Rammohan abolished the system of ‘Sati’ the burning of living women on her dead husbands pyre in 1818. Simultaneously he fought for the introduction of modern English education for men and specially for women because he realized that the depressed condition of Bengali women was the root cause of social immobility. He established ‘Atmiya Sabha’ in 1815 which sowed the seeds of Brahmo Samaj, where discussion went on that men and women both are born from Brohmo. The society was forced to accept the fact that women are as free as men in every matters even in case of education, and equal in merit.

In December 1823 Rammohan made an urgent plea to the Governor General Lord Almherst for the introduction of modern scientific education in India which was ultimately introduced in 1835 by lord Bentinct and Mecanlay for both sexes. At the same time Rammohan gave birth to patriotism by concentrating on mother language and Bengali.prose. The intermixing of East and West gave birth to a new rational Brahmo religion the product of which was characters like Tatini Das.

On 23rd January 1830 Rammohan founded the Adi-Brahmo-Samaja in Chitput – North Kolkata which became the mouthpiece of the new religion which was not anti British in character but Indian in spirit. He introduced participation of man and woman of every sect and caste in open prayer room together. It was the beginning of a new women era.

After his sudden death on 27th September 1833 the succeeding nine years were critical for the samaja until Debendranath Tagore (father of the great poet Rabindranath) gave it a new life. In 1839 he established ‘Tattwabodhini Sabha’ in Jorasanko North Kolkata, to discuss the Indian philosophical thought related with ‘Brohmo’. It gave shelter to the English educated young alienated intellectual Bengalis distracted and confused by the too much rigidity of Hindu religion and the Christian Missionary influence. Now they got their platform knowing again the richness of Indian classics which are their own. A patriotic feeling changed their attitude to do well for their country being a member of the new Brahmo religion which is a liberal product of Hindu dharma.

From 1843 the Twattabodhini Patrika became the journal of Sadharan Brahmo Samaja established by Debendranath in Bidhan Sarani – North Kolkata A rationalist Brahmo Akshoykumar Datta was the editor of the Patrika which promulgated advanced thinking – female education was one of them. Debendranath introduced mantras from Upanishad for the common people and compiled a prayer book ‘Brahmodharma’ selecting the essence of Vedas and the theological part from the Upanishads. Gradually the Brahmo religion became extremely popular in Bengal. This religion had the potential to satisfy the needs of the early 19th century English educated urban Hindus. This Indian intelligentsia fought earnestly for introducing modern education for men and women. During 1830s and 40’s they started to educate their female members at home until in 1849 the first school for girls of this gentleman (bhadralok) class with same syllabus was established. They considered education as a precondition of women’s modernization. Most of them were Brahmos and they were composed of Company employees; merchants under the company; the new feudal land lord class – a product of British rule-mainly the conditional revenue collectors of Bengal’s Permanent Settlement etc. Exception was the giant
Hindu reformer of the time *Vidyasagar* a strong patroniser of female education and female emancipation as a whole – through not a Brahmo himself.

New vistas opened up for the educated females who became engaged in different occupations with new ideas, new outlook, new honour in society and with their new fashions (the *Brahmika* style). A new set of values developed for them who now irrespective of their caste were offered to lead a decent life. Enlightened with knowledge and the aesthetic spiritual theory of *Brahmo*, women regained the courage and the right to pronounce the words *Meitrayee* uttered thousand and thousand years ago.

An important point is that even they were not from any Brahmin family who claimed their supremacy in society for a long time.

By 1901 female education had considerably spread among the upper caste Hindus of whom highest percentage were *Brahmos*. This can be shown by a table.

<table>
<thead>
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<th>Caste / sect</th>
<th>o/o of literacy</th>
<th>o/o of literacy in English</th>
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<td>Baidya</td>
<td>25.9</td>
<td>.8</td>
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<tr>
<td>Brahman</td>
<td>5.6</td>
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<tr>
<td>Brahmo</td>
<td>55.6</td>
<td>30.9</td>
</tr>
<tr>
<td>Kayastha</td>
<td>8.0</td>
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Source: Census of India 1901 vol V/A pt 11 Ref *Ghulam Murshid – Reluctant Debutante* Response of Bengali women to Modernism 1849 – 1905 (page 20)

Remarkably number of Brahmins were very poor. Bengali Brahmo ladies became inspirations of the ladies of other states who followed their footsteps.

A few *slokas* adopted by the *Brahmos* from *veda* about a girl child reveals their attitude towards her which was totally different from that of Hindu *samaja* “*Kanyapyebong Palniya Shikshaniyati Yatnat*” – A daughter in the family, must be brought up by giving proper education with care.

A father of a daughter should not take even a small amount of dowry for a girl child in the family.

That was the attitude of Vedic India, the land of ancient culture which realised the importance of women which the later orthodox Hindu society forgot and the *Brahmo* religion revived it.

No concept of child marriage of a girl is encouraged in this religion. After a long discussion the age of marriage of a girl was fixed up when she becomes matured. After being educated she could remain unmarried if she pleased as was the system in Vedic India. (For example I can refer that the 3 sisters of Tatini Das though highly qualified remained spinsters they were *Nabani Gupta, Kalyani Gupta and Sohini Gupta*).

It was mentioned in Samaja rules that both husband and wife must be loyal to each other to live a healthy married life. In a Brahmo marriage adult man and women select each other on their own as life partner and was married off in a simple way through Vedic mantras by the Acharya. The most important thing was that no kanya sampradan was made in this case because a girl was not considered to be any body’s property – she was a human being with full freedom.
The marriage expenses were bore by both families because there was no system of dowry.

Whereas in a Hindu society mainly in Brahmin caste due to ‘kulinpratha’ in tender age girls were married off forcefully to aged persons many years older than her with several wives who took dowries and the girl was transferred from her father or elder brother as a commodity to her husband in case of sampradan.

This disgraceful position of woman prescribed mostly by Manu was abolished with the introduction of Brahmo religion. The society changed with the new ideas, new life style.

Tatini Das was the product of this time this changing society, which we can find in her higher education, high qualifications, her marriage, her personality, and her execution of administrative power outside the family as a Principal of an important college in the British period.

The life of Mrs. Tatini Das (Gupta) is a part of the history of Bengali woman struggling to place herself in society with new thoughts and full power. Her cultured mind was ready to receive the transformation of the 19th century society.

From the family records and interviews I have collected some data. She was born on 28th October 1995 at Dacca but her ancient home was Gaila Village in Barishal. East Bengal. She died on 17th October 1953 in Kolkata at the age of 58 years only. She had a liberal and educated family background. Her father Shyamacharan Gupta later was the headmaster of Bethune Collegiate School, Kolkata and was a female educationist. Her mother Pramila was an educated Brahmo lady whose parents were Acharya Girishchandra Majumdar (1837 – 1913) and Manorama (1848- 1936) of Dacca. Girishchandra passed from Dacca College and became the Acharya of Barishal Brahmo Samaja. He was a zealous Female educationist and taught his wife Manorama who became the teacher of Eden Female school Dacca. Out of 13 first educated Bengali women 11 were from Brahmo background and Manorama was one of them. In 1881 Manorama became the first female Acharya of Barishal Brahmo Samaj. Their five daughters were educated and sang songs in samaja prayers; of them Pramila was Tatin’s mother. So there was the tradition of female education in Tatini’s family. Pramila’s sister Nirmala was married off to Dr. Nilratan Sarcar the renowned doctor of Kolkata (still there is a hospital in his name in Kolkata) Tatini did her higher studies staying at Nilranta Sarcar’s home at 61, Harrisson Road – North Kolkata. Tatini did hard struggle for her studies and came to be known as the great ‘Bidushi’ of her time. Before coming to Kolkata she stayed at Arah, Bihar where her father first was a headmaster. After the early death of her mother she looked after her 10 younger brothers and sisters cooking and feeding them and at a time did her studies. In her higher studies she met Saroj Kumar Das in Calcutta University an equally brilliant student of her class and later herself decided to marry him who was only 2 months older. The marriage was conducted by pandit Kshitimohan Sen of Viswabharati University with the ‘mantras’ of Vedas in a simple Brahmo method. Brahmo religion changed the orientation of a woman’s life and society had to accept it. Tatini took full advantage of the new religion and asserted her own will to take decision. Her husband Saroj Kumar Das was Brahmo from the time of his father Golok Das. His mother Sushila frequently came to stay with them and Tatini served her like any other daughter-in-law.
doing cooking and household works when she was also running the Bethune College efficiently as the Principal. She led a family life with husband and 3 sons supervising every family matters and handling the college affairs stimulatingly. She was changing the concept of a perfect woman which was the demand of the age.

After achieving extraordinary results in Matric and I. A. Tatini was admitted to Bethune college with Honours in Sanskrit. Bethune College had no provision for Honours subjects then. But Tatini’s case was considered as an exception. With the special permission of the Calcutta University Syndicate she was allowed to study Sanskrit as Honors subject as a lone learner.

After graduation she did not continue her studies for the time being for family disturbance but joined the Raven Shaw Educational Institution in Cuttak as a teacher. In 1919 she married her classmate Saroj Das and leaving her job joined the Eden School for girls in Dacca and worked there till 1921. After her first son was born on 22nd April 1924 she gave up her job and started her preparation for M.A. That was a turning point in her life. In 1926 she passed M.A. in Philosophy as a non-collegiate student securing 79% marks ranking 1st class second in Calcutta University among boys and girls. She proved again and again the tremendous capability of a woman as a sole fighter.

Already Saroj Kumar had Roychand-Premchand scholarship. He joined the Calcutta University as the professor of Philosophy and became a part-time lecturer of Rabindranath Tagore’s Viswabharati He got the Government scholarship and went to London University for his PhD on Bradley in 1927. Tatini followed her husband along with her baby son abroad. Their home in London was the meeting place of Indians living abroad. Some stayed with them who later became celebrities and wrote books of their homely stay in London.

While Saroj Kumar was completing his thesis Tatini did not waste her time.

In London she completed a Day Training College certificate course in 1928. She taught in Haverstock Hill Elementary School at Barlhigh Road Central School. In 1927-29 she taught Bengali language in the school of Oriental studies in London. She visited many Women Colleges in Oxford and Cambridge to know about female education. She was a zealous educationist from the very first. (All documents and letters supporting these evidences are found in Bethune College Archive)

After Saroj Kumar was awarded Phd. the family visited important European countries before coming back to India in 1929. A photo taken in London 1929 shows that Tatini wore sari in her usual Brahмиka (lady Brahmo) style but looking very modern in high heel shoes big gent’s wrist watch and elegant posture; elegancy combined with classical touch and personality.

Meantime Tatini was in constant touch of learning. She concentrated her study on Bradley because in 1929 she joined the Philosophical Congress in Lahore and read her research paper “Bradley from the stand point of –‘Samkar Vedanta’ there. It was published in the Calcutta Review in August 1930. She presented another research paper in Philosophical Congress in
Mysore in 1932 heading “A Realistic Analysis of Perception” which was also published in Calcutta Review, May 1933.

She wrote 3 more articles which can be mentioned here. In 1940 in ‘Indian Messenger’ she published “The Trinity in Women Education”

Two articles are found from Bethune College Collection named “Symposium on womens’ education” and ‘Reminiscences’. In old college magazine she wrote an excellent obituary after Rabindranath’s death.

She already had her 2nd son on 6th August 1931 shortly after that she joined the college. Her third son was born in 1940. By then she as the Principal of the Bethune College had become an efficient administrator.

After coming back from abroad and before joining Bethune College she established a school in South Kolkata named ‘Nari Siksha Pratisthan’ in 1930. It was the school not for education of women only but it was a training centre and also a shelter for the helpless women. She herself mentioned about this school in her bio-data that she had established this for the purpose of social work Tatini Das was a person who educated herself and applied her education for the wellbeing of the society. It was the training of the Brahmo religion of self-improvement and to do continuous good work for others, which she thought and did. She represented a phase, a time, a character in social history of India particularly Bengal and at a time played her role perfectly as a Bengali housewife, wife and mother. She applied the lofty thought of Veda and Upanished in her life style and influenced by the culture of Rabindranath (also a Brahmo) by performing his dramas on stages of big halls of Kolkata (like New-Empire) with songs and music by her girl students. Those who brought changes in Bengali taste and culture and diffused them in the social strata she was among those pioneers. She was acquainted with all the urban elites of her time, mostly Brahmos who was then the cream of the society and supported her in her works.

She herself was her own example. She kept good connections with her orthodox Hindu friends and relatives yet led a life of her own. She introduced open stage functions by her girl students when singing and acting by women was prohibited in Hindu society. Moreover she started a singing class in her home called ‘uttarayani’ by renowned singers and herself played on her baby organ ‘Bulbul’. She had scholastic discussion in her drawing room with Indian and foreign scholars and literary personalities of her time. In every work she had the support and co-operation of her husband Sarojkumar and family. The dramas which she conducted, her family members participated in those plays. Beside she always gave importance to family matters. She guided her sons as a tutor. She celebrated birthday parties of each family member in Bengali style by cooking Bengali sweet dish ‘payesh’ herself which was essential in this occasion and decorated home with earthen lamps (Pradip) and alpanas (drawing designs on floor with rice paste) and flowers. Guests were entertained with Bengali dishes cooked at home sitting on the floor in a row and having foods from banana leaves (Kalapata) in Bengali style. She led her life in an unclear family set-up but always tried to keep relations with all relatives because she believed in Indian family bondage she adopted modern western thinking but not the life style. As
an educated person she became involved in constructive social works in the field of female education, establishment of female school for the distressed women, female and lady welfare etc. That was the, social benefit and utilization of a woman’s education. She proved through her life style the injustice of the Dharmasastras on Indian women and overall on Indian civilization. She believed that women should be economically independent.

Her official documents preserved in the Bethune College Archive are the proofs of a rational, upright, unbiased, confident administrator in colonial India. The college with different sects had its golden period though it was a politically disturbed period of India. When Tatini started her career as a lecturer in 1932 The Round Table Conferences were held thrice in London (1930 – 32) but were fruitless. Mahatma Gandhi returned empty handed from London and was imprisoned. Civil Disobedience Movement started in 1932. Inspite of the political disturbances the Bethune College was going steady under the new Principal Tatini Das appointed in 1934. The authentic account of Mr. Jogesh Chandra Bagal of Bethune College of the period says “years of uninterrupted progress (1934 – 41) began”. By 1936 – 37 the College became the main inaugurator of female education and more girls were taking admission in science stream (college records) which was an encouraging sign.

She had to face and tackle the very critical and sensitive issue of Hindu Muslim relation in her time. It was very critical as the British Government was then following the divide and rule policy in Indian politics. Archival papers prove that D.P.I. Mr. Bottemly sent letters enquiring about the introduction of religious instruction in educational institutions. Many schools and colleges of Kolkata agreed to follow Governmental decisions but Tatini Das alone went against the decision. Also the British Government asked for employing religious teachers for the Muslim boys and Girls in the institutions which she denied, politely but firmly and tactfully. Communalism was spreading like poison in India but she remained secular.

The admission of Muslim girls increased in numbers during her tenure. She did not follow the instruction of the Government to arrange separate hostels for Hindu and Muslims students though it was done elsewhere. In 1936 she started a students’ hostel beside Bethune in 8, Bethune Row and it was mentioned in it’s rules that “No religious observances other than those purely individual will be permitted within the hostel precincts.”

Memoirs of some students specially two Muslim students are worth mentioning that is of Akhtar Imam the first Bengali Muslim female graduate from Bethune and that of Hamida Khanam.

Akhtar Imam in her memoirs (Eden theke Bethune Amar Jeevan Katha) says she was the resident of Bethune hostel of her time and came from Eden school Dacca as the name of Tatini Das was an assurance of their security. She was very happy of her student days.

Hamida Khanam also came from Dacca hearing the name of Tatini Das. During her 4 years stay in the College hostel she enjoyed excellent food, noticed no indiscipline, nobody believed about caste or eligon or ever discussed the topic “Our Thinking, our dress indicated that we are more advanced than our time” Tatinis’ liberal temperament and training eased the tension of religious division in society to some extent and as a whole improved female education. The policy of tolerance of Brahmo religion helped her much and she tackled situation on her own way. More and more. Muslim girls were admitted in the College in her time. An official letter of
29th August 1934 shows that she selected a Muslim candidate in her Governing Body like Mrs. Momin. From 1939 onwards she replaced female teachers in place of male ones to give scope to women. She became a source of inspiration and assurance to all sects of women.

A letter written by Tatin Das to the D.P.I. as an answer can be quoted here.

Office of the Principal, Bethune College, Calcutta.

No. 1250-62
2A.541.

Calcutta Dated the 12th August 1941

Sir,

….. I have the honour to state that this college admits students belonging to different religions viz. Brahminism, Islam, Christianity, Jamism, Sikhism, Judaism etc. It is not possible to impart religious instruction without the breach of religious neutrality in a mixed college like this one. Moreover there has never been any demand for religious instruction in this institution, I am therefore of opinion that the scheme will not be feasible in this college. I hope that you also agree with me in the matter.

Tatini Das
Principal, Bethune College

Political situation became more grave as firstly the demand of Pakistan was there and 2ndly by 1942 Japan declaring war against Britain and with the help of Netaji Subhash Chandra Bose reached Burma and India’s security was threatened. As a reactionary measure against bombing the Air Raid Precaution (ARP) personnel occupied many institutions including Bethune College.

As a result classes were suspended in many educational institutions. But Bethune classes continued. Tatini Das shifted them to her friend lady Abala Bose’s (wife of scientist Sir Jagadish Chandra Bose) institution ‘Vidyasagar Bani Bhavan’ for 4 years and herself decided to stay with her family during the war period in the Bethune quarters and run the office from there.

Other problems which she had to face was the August movement due to Gandhi’s imprisonment in ’42; consequences of a devastating cyclone which led to famine. Besides sending help to the famine stricken people she organized Tagore’s drama ‘Chirakumar Sabha’ and in 1945 ‘Raja’ for the mental relief of her students whom she had to save also from the effect of the communal riot.

In January 1946 the College returned to it’s old building and she tried hard to get back the old college hostel for ladies (of which she was the founder) not only for the interest of the college but for that of the womanhood of our country.

On 14th August midnight of 1947 India became free. She celebrated the event by inviting Dr. Prafulla Chandra Ghosh the first chief minister of Bengal of free India to be the president of the Indian flag hoisting ceremony in her College.

Her last achievement was the performance of Centenary Celebration of the school and college with grandeur for a week in 1949 to ’50. Important persons all over India and abroad were invited as guests. Among the programmes she organized were...
a. A Pageant depicting the landmarks in women education and social life in India from ancient times to the present day.

b. A symposium on women education etc. She published the Bethune School and College Centenary Volume after the programme which is a very important document of women’s excellence.

She started her life at a time when she travelled in a covered horse-drawn carriage to the Calcutta University as a student. Later she travelled in her open Pontiac car without hood not as a student now but as the first women syndicate member of the Calcutta University.

Her death on 17th October 1953 was not an end but the beginning of a new women era of the future generation of women.

Figure 1: Tatini Das.  
Figure 2: Rabindranath Tagore’s letter to Saroj Kumar Das.

Rabindranath Tagore’s certificate for Saroj Kumar Das who was a lecturer in Philosophy in Viswabharati in 1927. (Family Collection)
B. Celebrating the wedding of their eldest son (standing in white punjabi) in her usual dress 1950.

Figure 3: Tatini Das in 1950.

Marksheets of Tatini Das. (Collected from Calcutta University Archive Marksheets and calendar)

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**Compulsory Subjects**

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<tr>
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<tr>
<td>Classical Language</td>
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**Additional Subjects**

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<tr>
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Total: 640 (700)

First Division.

4. Name of the Examination: M.A., 1926

| Roll Cal No. | 24 |
| Name-Tatini Das | |
| Non College Student | |

**Subjects**

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Total: 553

First Division.
Figure 4,5,6: Academic records of Tatini Das in Matriculation, Intermediate and B.A. Examinations

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5. Sivnath Sastri – Atmarcharit
6. Sukumari Bhattacharya : Prachin Bharat – Samaj & Sahitya
7. Bamabodhini Patrika : Woman Studies – Research Centre : Calcutta University
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13. Maharshi Debendranath Tagore: Atmajibani
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19. David Koph: The Brahmo Samaj and the making of modern Indian mind
Privacy in the Communal Space: A Case Study of Indonesia

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Abstract

This writing aims to investigate whether there is a different understanding of privacy in the legal and social context in Indonesia. This writing will specifically talk about informational privacy. Informational privacy, according to the Stanford Encyclopedia of Philosophy, is a privacy that related to one’s control on one’s information. With regard to the protection of informational privacy, Indonesia has several legal instruments namely the 1945 Constitution, the Law No. 19 of 2016 on the Amendment of Law 11 of 2008 on Information and Electronic Transaction, and the Ministerial Regulation No. 20 of 2016 on Protection on Personal Data. This writing will study those legal instrument to construe what is an informational privacy in Indonesian legal context. However, regardless of those legal instruments, though an informational privacy is often perceived as important in the mind of the Indonesian internet users, the strong protection of such privacy is somehow still not highly demanded by those users. This is probably due to the widely accepted belief that one does not have an informational privacy anymore in this digital era. In addition to that widely accepted perception, there exists a claim that since Indonesia is a communal society, it is ’normal’ for a person to share ‘everything’ about his or her information, and that person is expected to do such sharing as well. Toward this conundrum, this writing will then look at the rulings of the Constitutional Court of Indonesia related to the Law No. 11 of 2008 since in such rulings, we can find the explanation of what it means to be communal society and the relation of such state to the protection of one’s informational privacy. Lastly, this writing will compare the construction of informational privacy in the Indonesian legal instruments and the understanding of communality and privacy in the Indonesian social context, and analyze such comparison to find whether there is a different understanding of privacy in legal and social context in Indonesia.

Keywords: communality, informational privacy, internet

1. Introduction

The discussion on privacy and its conceptual and practical divergence in Asia has been out there for a quite sometime.¹ As privacy often seen as a Western concept, those discussions focus on analyzing the different norms and practices in Asian countries such as Japan in comparison to Western countries such as United States.¹ Furthermore, in the context of internet, people from
Asia and Western world will act differently toward the importance of privacy. However, this does not mean they do not share similar behaviors, as Mizutani et al pointed out, they have at least a shared “minimal sense of privacy”. According to Mizutani et al, privacy in the “minimal sense of privacy” means as “situations of restricted access”. Accesses here includes access to information, access to locations, and access to objects.

Toward the discussion on privacy and divergence of norms and practices in Asia, this writing is an attempt to add Indonesia’s conception and practices of privacy to the discussion. In doing so, this writing aims to investigate whether there is a different understanding of privacy in the legal and social context in Indonesia. Specifically, this writing will discuss about informational privacy. Informational privacy, according to the Stanford Encyclopedia of Philosophy, is a privacy that related to one’s control on one’s information. This writing will consists of four parts. The first part is introduction. The second part is method used by this writing to find out whether there is a different understanding of privacy in the legal and social context in Indonesia. The third part is discussion and results. The last part concludes.

2. Method
The main research question of this writing is whether there is a different understanding of privacy in the legal and social context in Indonesia. In order to answer the main research question, there are three sub-questions. Those questions are:

a. How does informational privacy is construed in Indonesian legal context?
b. How does the protection of informational privacy relate to the communal character of Indonesian society?
c. What are the differences (and similarities, if any) between informational privacy in Indonesian legal and social context?

In order to answer the first sub-question, this writing will use legal method namely the interpretation from higher to low ranking law in order to find out how does informational privacy is construed in Indonesian legal context. This means that this writing will look at the 1945 Constitution of Indonesia (hereinafter, “the 1945 Constitution”), the Law No. 19 of 2016 on the Amendment of Law 11 of 2008 on Information and Electronic Transaction (hereinafter, “IET Law”), and the Ministerial Regulation No. 20 of 2016 on Protection on Personal Data (hereinafter, “Protection on Personal Data Regulation”) and analyze how mentioned laws construe informational privacy in their provisions. Furthermore, this writing will also look at relevant literatures in interpreting mentioned laws.
As for the second sub-question, this writing will study the rulings related to informational privacy from the Constitutional Court of Republic Indonesia (hereinafter, “Constitutional Court”). The reason behind studying these rulings is that in those rulings, we can find out how informational privacy is construed in the Indonesian social context. The judges of Constitutional Court of Republic Indonesia must take into account social conditions when they discuss and want to decide a particular case. This writing will discuss Ruling No. 50/PUU-VI/2008 and Ruling No. 20/PUU-XIV/2016. The former is a constitutional review on Article 27 para. (3) and Article 45 para. (1) of IET Law on prohibition of defamation and penalty on violation of that prohibition. The latter is a constitutional review on Article 5 para. (1) and (2), and Article 44 letter b of IET Law on the usage of electronic information and/or electronic documents as a legitimate evidence before the Indonesian domestic court.

Lastly, regarding the third sub-question, this writing will analyze the construction of informational privacy in Indonesian legal and social context. To do so, this writing will compare the provisions in the Indonesian laws and the judges’s consideration in the ruling of Constitutional Court and discuss whether there are differences between the two.

3. Results and Discussion

*Informational Privacy in Indonesian Legal Context*

In Indonesian legal context, the right to privacy is constitutionally protected in Article 28G(1) of the 1945 Constitution. The right to privacy, as Jayadi points out, entails a person for the protection of her or his body and her or his property, honor and dignity.1 Specifically for informational privacy, a privacy that related to one’s control on one’s information, is not explicitly stated in the 1945 Constitution. The Constitution only stipulated right to privacy in general. However, this does not mean that the Article 28G(1) of the 1945 Constitution does not protect informational privacy.1 Precisely because its general characters, the Article 28G(1) of the 1945 Constitution makes right to privacy can be elaborated more on the low-ranking law namely IET Law.

The IET Law regulates the informational privacy in its Article 26. The Articles says “*Unless provided otherwise by Laws and Regulations, use of any information in electronic media that involves personal data of a Person must be made with the consent of the Person concerned*”. Furthermore, according to the IET Law, that person can withdraw her or his consent that she or he is no longer wish her o his personal data to be used in the electronic media.1 In short, the IET Law provides a Person (both natural and legal ones) the power to control one’s information/personal data. The IET Law does so by putting the consent of a Person as a key aspect of using a Person’s personal data in the electronic media.
Further elaboration on IET Law is to be found in the Protection on Personal Data Regulation. The Regulation defines “consent” of a Person as a data subject as follows:

“Consent is a written statement in manual and/or electronic that is given by the Person/Data Subject after having a comprehensive explanation on obtainment of data, collection of data, management of data, data analysis, data storage, data presentation, announcement, transfer of data and dissemination of data as well as secrecy of data or data publicity of Personal Data.”

Other than defining consent more precise than in the IET Law, this Protection on Personal Data Regulation elaborates more on how and to what extent one can have control on one’s information including the legal recourses when, for example, there is failure to protect the secrecy of one’s information.1

To briefly sum up, the legal instruments in Indonesia namely the 1945 Constitution, the IET Law, and the Protection on Personal Data Regulation do protect right to privacy and elaborate ways to exercise one’s right to informational privacy.

**Informational Privacy in Indonesian Social Context**

The Constitutional Court in Indonesia primarily have the role as the main and sole state organ that can legitimately interpret the 1945 Constitution.1 With regard to this primary role, the judges of the Constitutional Court, when making their decisions, are not only take into account relevant legal rules but also the social context of the issue in question. In the context of informational privacy, the judges of the Constitutional Court are taking into account both relevant legal rules (e.g. the 1945 Constitution and IET Law) and the social context of informational privacy in Indonesia. To find out more on this, there are two rulings that will be discuss in this writing namely Ruling No. 50/PUU-VI/2008 and Ruling No. 20/PUU-XIV/2016.

Ruling No. 50/PUU-VI/2008 is about challenging the constitutionality of the prohibition of defamation and penalty of violation of such prohibition. The claimants in this case argued that such provision harmed their right to freedom of expression. In the judgement, the judges of the Constitutional Court replied to this concern. They say, despite the fact that one has the right to freedom of expression, one should take into account other people’s right as well specifically right to privacy.1 The judges further specify the right to privacy here includes the right to the protection of one’s dignity that information published might harm (or already harmed) a dignity of a particular person.1 In this case, the judges of the Constitutional Court dealt with the right to freedom of expression and its intersection with the informational privacy; on one hand, one’s right to freely write something about other people’s information cannot and should not be carried
out in way that it forget that other people have interest in maintaining their dignity through having a control of their own information, and on the other hand, one’s power to control information might hamper other people’s right to access that information and to express their opinion or thoughts about it.

On the Indonesian social context, in the Ruling No. 50/PUU-VI/2008, the judges gives insight on how being communal society relates to the protection of the right to privacy. The judges explain that Indonesia as a communal society regards dignity of a person as sacred since such person along with her or his dignity is a bliss coming from Almighty God.¹ That being the case, the dignity of a person must be protected under the right to privacy as stipulated in the 1945 Constitution and the dignity itself is related to what kind of information about that person is “out there” (e.g. on the internet). To further the judges’ analysis, such protection actually is not only in a form of constitutional provision in the 1945 Constitution but also through more elaborated law such as IET Law that regulates about the importance of consent when using someone’s information.

Then, Ruling No. 20/PUU-XIV/2016 is a constitutional review on Article 5 para. (1) and (2), and Article 44 letter b of IET Law on the usage of electronic information and/or electronic documents as a legitimate evidence before the Indonesian domestic court. To be specific, this Ruling talks about the interceptions and/or recordings and whether or not the result of such interception and/or recording without a consent of the persons of interest can be used before the Indonesian domestic courts. The claimant argued that the existing laws do not have sufficient provision to regulate about this thus such interceptions and/or recordings can be carried out in a manner that violate the claimant’s human rights.¹

In Ruling No. 20/PUU-XIV/2016, the judges’ response from the claimant is that they agree with the claimant’s argument on the insufficiency of existing laws on the procedures of interceptions and/or recordings and to use the result of such interception and/or recordings before the Indonesian domestic courts. There was one dissenting opinion that argued the existing laws are enough. Nevertheless, by having agreed to the claimants’ argument on the importance of sufficiency of existing laws, the judges of the Constitutional Court showed that they concern with the informational privacy of the persons of interest as the result of interceptions and/or recording contains information that probably the persons of interest want to keep it secret or to restrict public access to it. Although (and this precisely the contested matter in the Ruling No. 20/PUU-XIV/2016) the concern over the informational privacy become more complicated when it collides with criminal conduct.
To briefly sum up, from the judges’ consideration and their account in the Ruling No. 50/PUU-VI/2008 and Ruling No. 20/PUU-XIV/2016, the informational privacy exists in Indonesian social context and it exists precisely because Indonesia is a communal society that regards individuals as blessing from the Almighty God.

**Informational Privacy in Legal and Social Context: A Disparity?**

It has been explained how Indonesian laws regulate about privacy especially informational privacy and how does the protection of informational privacy relate to the communal character of Indonesian society.

In Indonesian laws, the IET Law and Protection on Personal Data Regulation puts the consent of the “owner” of the information as the basis of using that “owner” information. Here, the requirement of consent acts as a barrier or restriction to access one’s information. Furthermore, the requirement of consent gives the individual the power to control their information “out there”. Though, it is to further ask on how the controller of data try to fulfill the requirement of consent and how to check the compliance (but, this is not within the scope of this writing).

Regarding the Indonesian social context, the judges’ consideration in the rulings of the Constitutional Court give us understanding how does being a communal society relate to the protection of informational privacy. Despite the narrative that there is no such thing as privacy in the communal society like Indonesia, the judges of the Constitutional Court says otherwise. The judges say precisely because Indonesia is a communal society, a person’s informational privacy is protected especially if it is related to the protection of that person’s dignity.

Based on the explanation on informational privacy in Indonesian legal context and the judges’s account on Indonesian social context (Indonesia being a communal society), it seems that there is no disparity or different understanding of privacy between those two contexts. Both in legal and social sphere regard informational privacy is important and it needs to be protected. Individual consent here has an important role. Nonetheless, this writing realizes that judges’ account on Indonesian social context cannot and should not be taken for granted. Further studies (maybe from sociological perspective) are encouraged to pursue more on this topic.

4. **Conclusion**

This writing asks the main question on whether there is a different understanding of privacy in the legal and social context in Indonesia. In order to answer the main question, this writing elaborates on the construction of informational privacy in Indonesian legal context by studying the 1945 Constitution, the IET Law, and the Protection on Personal Data Regulation. This
writing founds that informational privacy exists in Indonesian legal sphere. IET Law and the Protection on Personal Data Regulation give detailed account on informational privacy. As this writing points out, the individual consent is the key point for that individual to control her or his (“published”) information. Moreover, this writing elaborates on the relation between the protection of information privacy and the communal character of Indonesian society. This writing scrutinized the rulings of the Constitutional Court of Republic of Indonesia. This writing found that the informational privacy exists in Indonesian social context and it exists precisely because Indonesia is a communal society that regards individuals as blessing from the Almighty God. Based on this explanation, this writing found that there is no difference between the need for the protection of informational privacy in Indonesian legal context and social context. However, this writing notes that further studies (maybe from sociological perspective) are encouraged to pursue more on this topic.
Why University Students Use LinkedIn: The Role of Uses and Gratifications Theory, Subjective Norm and Gender in Influencing Continuance Participation Intention

Arga Hananto

ABSTRACT
This study investigated how subjective norm and motives from uses and gratifications theory affect continuance participation intention. In addition, this study also investigated the role of gender as moderating variable in the relationship. A moderated regression analysis was conducted on a sample of 246 respondents selected by purposive sampling technique. The result indicated that subjective norm, and all uses and gratifications motives in the model (information seeking and sharing, self-discovery, maintaining interpersonal connectivity, social enhancement, entertainment value) affect continued participation intention of female students, while for male students, information seeking and sharing was not significantly affecting continuance participation intention. Subjective norm was found to affect male students more strongly than female students, while information seeking and sharing were found to affect female students more strongly than male students. This study adds more insights into the literature on SNS continuance participation intention, particularly on the role of gender in affecting the process.

KEYWORDS
subjective norm; uses and gratifications; social networking service; continuance participation intention; gender

1. Introduction

Social networking sites (SNS) are “web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system (boyd & Ellison, 2008, p.211).”

Al-Debei et al. (2013) report that some SNSs have declined due to their inability to retain their users to engage in long-term activities. The decline of some SNSs highlight the importance of users’ continued participation to growth and survival of social networking sites (Chang, Hung, Cheng, & Wu, 2015; Chiu, Cheng, Huang, & Chen, 2013). Maintaining participation of existing users is also important to ensure user growth, since current users can show the benefits of social network sites to their friends and relatives, creating network effect that contribute to user growth (Powell, 2009, in Lin & Lu, 2011).
This study aims to examine the factors that influence continuance participation intention of university students toward LinkedIn using uses and gratifications theory (UGT) and subjective norms as the research framework. In this study, the authors would like to adapt model proposed by Ifinedo (2016) and extend it further by incorporating gender as a moderating variable.

Gender has been found to moderate the relationship between gratifications obtained and continuance intention in SNS (Krasnova, Veltri, Eling, & Buxmann, 2017), mobile television (Choi, Kim, & McMillan, 2009), and online game (Li, Liu, Xu, Heikkilä, & van der Heijden, 2015). The impact of subjective norm on intention has been reported to be different across genders (Hwang, 2010; Venkatesh, Morris, & Morris, 2000).

This study focuses on college students from Indonesia. Indonesia represents an emerging market with digitally savvy internet users that boast the highest Internet usage and social media among other countries in the world, and it is predicted that digital technology applications in Indonesia will reach total impact of US$ 150 billion by 2025 (Das, Gryseels, Sudhir, & Tan, 2016).

2. Theoretical Background, Research Model and Hypothesis

Figure 1 presents our conceptual model. Research model in this research incorporates UGT and subjective norms in explaining continuance participation intention.

2.1. Continuance participation intention

In information systems literature, information systems continuance reflects the likelihood that a person will continue using information systems in the future (Huang & Lin, 2011). According to Al-Debei et al. (2013), intention to continue using an information system is distinct from initial acceptance or adoption of the system. Al-Debei et al. (2013) maintain that continuance participation or use intention is part of post-adoption behaviour which is driven by some factors, such as experiences and perceived value. Bhattacherjee (2001) maintain that after initial acceptance, users might feel some previously unfelt psychological motivations which potentially influence their successive continuance decisions to use information systems.

Continuance intention was chosen as dependent variable since the population of interest were university students who have used LinkedIn before, and the this study intends to focus on their future intention to stay with LinkedIn, reflecting post adoption behaviour as suggested by (Al-Debei et al., 2013).

2.2. Uses and gratifications and continuance participation intention

Based on past studies, authors suggest the following UGT factors that may affect continuance intention in using LinkedIn:
- Information seeking and sharing: Research on virtual community (Dholakia, Bagozzi, & Pearo, 2004) suggest that people participate in such community to derive informational value, which is a value that participants get from getting and sharing information in a virtual community and from knowing what other people think. Ku, Chu, & Tseng (2013) suggest that information is one of four primary needs of participating in a social networking service.

H1: Information seeking and sharing is positively associated with continuance participation intention

H2: Self-discovery value is positively associated with continuance participation intention

- Self-discovery: Dholakia et al. (2004) propose that self-discovery involves understanding and deepening salient aspects of one’s self through social interactions. Furthermore, they suggest that self-discovery drive users to interact with others to gain access to social resources needed to attain personal goals as well as to help the person to form, define and elaborate on one’s own preferences, tastes, and values.

- Maintaining interpersonal connectivity: According to Ku et al. (2013), this refers to social benefits realized from establishing and maintaining contact with other people. Raacke & Bonds-Raacke (2008) found that maintaining relationships with others were amongst the most popular reasons for using social networking service. Study by Pempek et al. (2009)
suggest that college students use social networking service for social interaction, particularly with those they already know offline but no longer in close contact.

H3: Maintaining interpersonal connectivity is positively associated with continuance participation intention

- Entertainment value: Entertainment value refers to the fun and enjoyment a person experience from interaction with other people in an online network (Ku, Chen, & Zhang, 2014). Entertainment has been mentioned as one of the main motives for using computer-mediated media such as social networking service (e.g. Ko et al., 2014; Ku et al., 2013; Ifinedo, 2016).

H4: Entertainment value is positively associated with continuance participation intention

- Social enhancement: This motive refers to the value that a participant derives from gaining acceptance and approval of other members as well as status enhancement a person gets from providing contributions to the person’s community (Cheung, Chiu, & Lee, 2011; Dholakia et al., 2004). Social enhancement is about impressing others or appear stylish by using SNS like LinkedIn as status symbol (Xu, Ryan, Prybutok, & Wen, 2012). Flanagan & Metzger, (2001) suggest that media can be selected due to its symbolic value, thus using a media to impress others may be a motivation driving a particular media use.

H5: Social enhancement is positively associated with continuance participation intention

3.2 Subjective norm and continuance participation intention

Subjective norm refers to perceived social pressure to perform or not to perform a behaviour(Ajzen, 1991). Originally proposed as part of the Theory of Planned Behaviour (Ajzen,1988 in Ajzen, 1991), subjective norm has been used in past research to explain continuance participation intention (e.g. S.-C. Chen et al., 2012; Hajli, Shanmugam, Powell, & Love, 2015b; Ku et al., 2014; Mouakket, 2015).

In new technology adoption, information from reference groups such as family and/or friends are important to influence adoption decision by a person without prior usage experience (Cheung et al., 2011). S. C. Chen et al. (2012)suggest that subjective norm can influence continuance intentionbecause web 2.0 applicationslike SNS are socially oriented in nature.Ku et al.(2014)suggest thats subjective norm encourage members of certain groups to conform to the group’s norms to become part of an in-group. So, when a person’s reference group strongly recommend continued use of a particular SNS, he or she may choose to accept and comply with the group’s opinion and continue using SNSs (Ku et al., 2014).
H6: Subjective norm is positively associated with continuance participation intention

3.3. Gender and UGT factors

Difference between men and women in information systems studies has been documented. Men and women have been reported to have different behaviors in terms of information seeking and sharing. Magnuson & Dundes (2008) found that women tend to share more personal information on SNS than men. Apparently, in female-oriented discussions, requesting and supplying information is more common than in male-oriented discussions (Herring, 1996). Lu & Hsiao (2009) reported that women tend to be more willing to share personal information on their blogs due to a higher need for self-expression. Therefore, it can be hypothesized that information seeking and sharing’s effect on continuance participation intention will be more profound for women than for men.

Women’s communication patterns are also proposed to be more focused on relational interdependence (Krasnova et al., 2017), which is reflected in close relationships and interactions. According to Dholakia et al. (2004), self-discovery motivate users to interact with others to gain access to social resources needed to attain personal goals as well as to help the person to form, define and elaborate on one’s own preferences, tastes, and values. The authors propose that self-discovery motive will be more prominent for women than men due to women’s focus on relational interdependence. Furthermore, women’s focus on relational interdependence would make maintaining interpersonal connectivity more prominent for women than for men.

H7: Information seeking and sharing will have a stronger positive association with continuance participation intention for women than for men.

H8: Self-discovery will have a stronger positively association with continuance participation intention for women than for men.

H9: Maintaining interpersonal connectivity will have a stronger positive association with continuance participation intention for women than for men.

Barker (2009) suggest that female SNS users have higher score of entertainment motive than male SNS users. Similarly, Haferkamp, Eimler, Papadakis, & Kruck (2012) reported that female users demonstrate higher values on entertainment motive in SNS use.

Evidences from past studies, (e.g. Bonds-Raacke & Raacke, 2010; Manago, Graham, Greenfield, & Salimkhan, 2008;) suggest that men and women equally use SNS for certain forms of social enhancement, whereby they would put information in social media that make them appear attractive and successful. Krasnova et al. (2017) indicate that men and women equally tend to self-enhance themselves in SNS, although they use different approach to attain self-enhancement.
H10: Entertainment value will have a stronger positive association with continuance participation intention for women than for men

H11: Gender does not moderate the association between social enhancement and continuance participation intention

3.4. Gender and subjective norm

By drawing upon past research from 1960s to 1990s, Venkatesh et al. (2000) proposed that women tend to be more susceptible to social norms than men due to women being more people oriented, more motivated by needs for affiliation, interpersonal relationships, greater awareness of others’ feelings, and desire to promote harmonious functioning of groups. They also suggest that women are more willing to consider other people’s opinion in considering new technology. In line with literature, Hwang, (2010) found that gender moderates the impact of social norms on e-commerce system adoption decision, whereby influence of social norms is stronger in female group than male group.

H12: Subjective norm will have a stronger association with continuance participation intention for women than for men.

METHODS

Measurement items for were derived from existing sources: Subjective norms (Al-Debei et al., 2013; Cheung & Lee, 2010; Ku et al., 2014); Information seeking and sharing(Baek, Holton, Harp, & Yaschur, 2011; Ku et al., 2014); self-discovery (Ifinedo, 2016); maintaining interpersonal connectivity(Cheung et al., 2011; Ifinedo, 2016); social enhancement (Ifinedo, 2016; Ku et al., 2014; Park, Kee, & Valenzuela, 2009); entertainment value (Hsu, Tien, Lin, & Chang, 2015; Ifinedo, 2016) and continuance participation intention ((Al-Debei et al., 2013; Ku et al., 2014). In terms of UGT measurement, the authors substituted information seeking and sharing for purposive value to reflect two specific purposes that might motivate users to use LinkedIn.

All measurement items were translated to Bahasa Indonesia using back-to-back translation, and checked for wording accuracy before it was administered to the respondents. All items were measured using 7-point Likert scale and pre-tested before the main survey. Following pre-test, main survey was conducted among university students in a state university located in greater Jakarta area who have active LinkedIn account. Respondents were sampled using purposive sampling.

A final sample of 246 respondents with complete questionnaire were used in data analysis. There were equal number of male and female respondents, with 52% of respondents from 20-21-year-old age group, followed by 22-24-year-old age group (30.6%) Only 17.3 % were from 18-19-
year-old age group. In terms of membership length, more than 60% of respondents have used LinkedIn between 6 and 24 months.

Reliability testing results indicated that all measures satisfied the minimum level of Cronbach’s alpha of 0.7 as suggested by Nunnally (1978). In addition Cronbach’s alpha, to ensure adequate reliability and validity, the author conducted factor analysis with direct oblimin rotation in R Statistical Program (R Core Team, 2016) using package Psych (Revelle, 2016). All indicators loaded clearly on its respective factors with no factor loadings less than 0.32 and no cross-loadings above 0.32 as suggested in Tabachnick & Fidell (2012). All the indicators had square root of AVE higher than .70 and all square roots of AVEs in the diagonals were higher than correlations between construct. These facts indicated convergent validity as well as discriminant validity, respectively (Fornell & Larcker, 1981).

RESULTS AND DISCUSSION

Multiple linear regression was carried out to analyze the effect of subjective norm, information seeking, self-discovery, maintaining interpersonal connectivity, social enhancement, and entertainment value toward continuance participation intention with gender as moderating variable.

Table 1 contains summary of multiple regression results (initial/reduced model and final model). In the final model, only five independent variables reported to have significant and positive association with continuance participation intention, namely: subjective norm (standardized β = 0.471, t = 6.217, p < 0.001), self-discovery (standardized β = 0.173, t = 3.038, p < 0.01), maintaining interpersonal connectivity (standardized β = 0.111, t = 1.915, p < 0.05), social enhancement (standardized β = 0.124, t = 2.476, p < 0.01), and entertainment value (standardized β = 0.202, t = 3.427, p < 0.001).

Table 1. Summary of Multiple Regression Analysis Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>Std Error</th>
<th>t</th>
<th>Std β</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model 1 (without moderating variables)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Intercept)</td>
<td>-0.561</td>
<td>0.71635</td>
<td>-0.783</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Subjective norm</td>
<td>0.270</td>
<td>0.05050</td>
<td>5.352***</td>
<td>0.285</td>
<td>1.363</td>
</tr>
<tr>
<td>Information seeking &amp; sharing</td>
<td>0.111</td>
<td>0.06334</td>
<td>1.751*</td>
<td>0.101</td>
<td>1.590</td>
</tr>
<tr>
<td>Self-discovery</td>
<td>0.159</td>
<td>0.05327</td>
<td>2.989**</td>
<td>0.173</td>
<td>1.600</td>
</tr>
<tr>
<td>Maintaining interpersonal connectivity</td>
<td>0.128</td>
<td>0.05435</td>
<td>2.356*</td>
<td>0.137</td>
<td>1.633</td>
</tr>
<tr>
<td>Social enhancement</td>
<td>0.082</td>
<td>0.03526</td>
<td>2.335*</td>
<td>0.119</td>
<td>1.242</td>
</tr>
<tr>
<td>Entertainment value</td>
<td>0.186</td>
<td>0.05214</td>
<td>3.566***</td>
<td>0.212</td>
<td>1.700</td>
</tr>
<tr>
<td><strong>Control variables:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.060</td>
<td>0.031</td>
<td>1.928*</td>
<td>0.089</td>
<td>1.031</td>
</tr>
<tr>
<td>Membership_d1</td>
<td>0.129</td>
<td>0.111</td>
<td>1.162</td>
<td>0.061</td>
<td>1.336</td>
</tr>
</tbody>
</table>
Based on the results, all hypothesized main effects were found significant except for H1 (information seeking and sharing). Hypothesis testing of moderating variable was assessed by looking at significance of the interaction terms, followed by simple slope analysis as prescribed by Jaccard & Turrisi (2003) and (Cohen, Cohen, West, & Aiken, 2003). The results from Table 1 suggest that two interactions were found significant: gender x subjective norm (standardized β = -0.222, t= -3.21, p<0.001) and gender x information seeking & sharing (standardized β = 0.152, t=2.289, p<0.05).

To analyse the moderation further, simple slope analysis based on Cohen et al. (2003) was conducted using Pequod package (Mirisola & Seta, 2016) in R statistical program (R Core Team, 2016). The result was reported in Figure 2 and 3. Figure 2 indicates that information seeking and sharing affects continuance participation intention for female students (slope = 0.233, t(233) = 2.72, p < 0.01), but not for male students (slope = -0.0139, t(233) = -0.18, p = 0.861). This, along with positive regression coefficient for the interaction (see Table 1) indicates support for H7. Meanwhile, Figure 3 indicates that continuance participation intention of both genders tend to increase as subjective norm increase (slope for male group = 0.448, t(233) = 6.21, p < 0.001; slope for female group = 0.150, t(233) = 2.32, p < 0.05), although the social norm effect on continuance participation intention is higher on male students. This result indicates that H12 was
not supported, since the direction of relationship turned out to be different from the hypothesized relationship.

![Graph 2](image2.png)

Figure 2. Moderating effect of gender on the a between Information sharing and continuance participation intention

![Graph 3](image3.png)

Figure 3. Moderating effect of gender on the relation between subjective norm and continuance participation intention

The purpose of this study is to examine factors that motivate college students to use LinkedIn. The results highlight the importance of subjective norm (i.e. endorsement from people highly regarded by an individual resulted in perceived pressure to follow the endorsement) as well as gratifications in stimulating continued use or participation in SNS platform.

Subjective norm (Model 1: $\beta = 0.270, p<0.001$; Model 2: $0.446, p <0.001$) was found to significantly affect “Continuance Participation Intention”. According to Cheung et al. (2011), in the context of new systems whereby new users do not have direct experience, advice from reference groups is important to influence their usage decision. At first college students might not be aware of LinkedIn, then after his/her reference group strongly endorse the SNS, he/she may choose to comply (set up account), and subsequently continue to use the SNS. Past studies
regarding SNS have also maintained that normative influences positively affects behavioural intention to use SNS (e.g. Ifinedo, 2016; Ku et al., 2014). This process highlight the importance of reference groups to endorse SNS and encourage college students to keep using the SNS.

In Model 2 (moderated regression model in Table 1), although male and female students were affected by subjective norm, it was found that the effect of subjective norm on continuance intention were stronger for male students than for female students. This is contrary to the hypothesized relationship. Sasson & Mesch (2016) found stronger effect of peer influence on boys’ risky online behaviour, thus suggesting that young men are more susceptible to peer influence. Cestac, Paran, & Delhomme (2011) suggest that young men’s susceptibility to peer pressure may be related to competitive relations they experience with their peers. Krasnova et al. (2017) suggest that from early age boys tend to be encouraged to be independent, assertive and competitive, which strengthens their desire to keep up with others. This desire to “keep up with the others” may explain male students’ susceptibility to subjective norm.

Results from this study reveal that students use LinkedIn for the same motivations that drive the use of other SNS, namely entertainment, self-discovery, social interactions, and social enhancement, as well as for information seeking and sharing.

Entertainment carries significant role in shaping continuance participation intention. As suggested in Pai & Arnott (2013), fulfilment of entertainment needs is a key requirement from SNS users. This study is also consistent with past studies that propose that people use SNS to gratify social interactions and entertainment needs as well as self-discovery and social enhancement (e.g. Cheung et al., 2011; C.-M. Chiu et al., 2015; L. Y. Huang et al., 2014; Ifinedo, 2016). Social enhancement is also found to be significant in predicting continuance participation intention, although with lower standardized $\beta$ than entertainment and self-discovery. This study also supports past studies that indicated that social enhancement was one of major gratifications for using SNS such as Facebook (e.g. (H.-T. Chen & Kim, 2013; Cheung et al., 2011; Hsu et al., 2015).

Compared to UGT factors, it seems that students’ LinkedIn continuance participation intention was more driven by subjective norm (i.e. to comply with reference group endorsement), entertainment (e.g. lurking and browsing LinkedIn profile and contents to pass time and seek escapism), and self-discovery (learning and understanding about self) than social enhancement motives. Perhaps this is due to students currently having low needs to market themselves in the job market as they have not yet graduated. However, this may change over times as they reach graduation and enter job market. Perhaps, this can be verified through longitudinal study that look at whether motivations to continue using LinkedIn changes as students transition into early career employees and beyond.

In the moderated regression model, information seeking and sharing’s role in affecting continuance participation intention depends on the gender. Interaction terms in Table 1
(standardized β = 0.150, t = 2.237, p < 0.05) and simple slope in Figure 2 indicated that the effect of information seeking is stronger on female students, but less profound on male students. This finding is in line with past research and theories that suggest women tend to share more information more than men. This is probably due to women’s communication orientation that tends to be more focused on relational interdependence (Krasnova et al., 2017) which is reflected in close relationships and interactions, as well as information sharing.

Limitations and directions for future research

This study has certain limitations. Firstly, the sample in this study was limited on college students from a state university in greater Jakarta area. Thus, findings in this study needs to be validated in other samples. Secondly, the findings pertaining to moderating effect of gender might need further investigation. Besides validating the findings, understanding why the effect of subjective norm was stronger among male students and why the effect of information seeking and sharing was stronger among female students may be carried out to build upon this study.

CONCLUSION

Past studies have investigated factors that affect SNS from various perspectives, including use and gratifications theory, mostly on general purpose SNS such as Facebook or similar SNS. However, more specific SNS such as LinkedIn was relatively understudied. This study incorporated subjective norm and Use and Gratifications Theory to investigate the factors that affect college students’ intention to continue participating in LinkedIn. This study has found support that students’ intention is driven by subjective norm, information seeking and sharing, entertainment value, maintaining interpersonal connectivity, self-discovery and social enhancement. Gender was also found to moderate the relationship between subjective norm and continuance participation intention as well as the relationship between information seeking and sharing. Although these findings still need further validation, this study has contributed in highlighting some factors that might help practitioners to understand the motivations of college students to continue participating in a special purpose SNS such as LinkedIn.

REFERENCES


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Interference of Bahasa Indonesia Rules of Affixes in Thesis Writing in Bahasa Melayu: A Study among Indonesian Graduate Students

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ABSTRACT

The population of Indonesian graduate students studying in Malaysia has kept increasing. Academic writing is an essential element in graduate schools. However, many students, especially international students, struggle to master language skills necessary to support their academic writing. More challenges are faced when the students are language learners who lack knowledge in the target language. This study investigated the Indonesian graduate students’ dissertations written in Bahasa Melayu. The evaluation focused on the use of affixes in students’ writing. A focus group discussion was conducted to explore the rationales for the students’ difficulties in academic writing. The study found that the students applied their Bahasa Indonesian grammatical rules in their writing in Bahasa Melayu. These applications impacted in negative transfer leading to the errors produced in the writing. The focus group discussions revealed information that students lack immersion and confidence to communicate in the language. The students also suffered lack of knowledge in the target language. The study finally suggested that the higher education institutions facilitate language courses that can enhance international students’ language learning of Bahasa Melayu.

Keywords: Academic Writing; Bahasa Indonesia; Bahasa Melayu; Grammar; Affixes; Second Language Writing

1. INTRODUCTION

Malaysian universities are among the top choices of Indonesian students pursuing graduate study abroad. Indonesia is among the top five origin countries of international students in Malaysia (The Institute of International Education, 2016; The Sun Daily, 2017). One of the main challenges that students face when studying abroad is the language. Learning a new language takes time and practice. Indonesian students studying in Malaysia may be benefitted by the similarities shared between Bahasa Indonesia and Bahasa Melayu. The immersion process that can aid the students’ mastery of Bahasa Melayu may not require much time and much practice. Yet, the Indonesian students struggle in their academic writing of Bahasa Melayu. For several programs in Malaysian colleges, Bahasa Melayu is a mean of communication. For Indonesian students who are not well verse in English, they prefer these programs to pursue higher education.
Now, they face challenges to write in Bahasa Melayu. Despite the similarities between the two languages, Bahasa Melayu have its uniqueness in rules and regulations absent from Bahasa Indonesia. The Indonesian students are not aware or knowledgeable about such differences, and on top of that, they lack mastery of formal Bahasa Melayu used in written form. As a results, their academic writing products are highly criticized.

Academic writing plays a very crucial role in predicting success in graduate schools. For students in Master programs, academic writing is a compulsory to complete coursework assignments and that they need to continuously develop their writing skills throughout the program duration (Thomas, 2005; Wasley, 2008). For graduate students from any discipline, academic writing is critically needed to present their novice ideas, synthesize perspectives, and expansion of the present theories or concepts (Kaur, 2017).

Impaired in academic writing could be an impact of multiple factors. The language factors are the most commonly reported among students who accounted difficulties in academic writing (Chou, 2011). Among the language barriers, vocabulary and grammar are elements with high concerns raised among students (Brown, 2008). One of the notable differences between Bahasa Melayu and Bahasa Indonesia lies in the grammatical rules for the use of affixes.

1.3. Grammatical Knowledge Role in Academic Writing

1.2. Definition of Affix and Its Role in Bahasa Melayu Writing

An affix (in modern sense) is a morpheme that is attached to a word stem to form a new word or word form. Morpheme is the smallest granular unit that has the meaning as in the example of the word makan and makanan. These two words show similarities and differences between the meanings they support. The similarity lies in the root makan presence in both words. The difference is that the whole meaning of the two words. What makes that difference is the end-of-the-morpheme.

According to Nik Safiah (2009) a morpheme is the smallest unit in a language that has grammatical functions or performing grammatical tasks. Morphemes are divided into free morpheme and bound morpheme. Free morphemes are the ones that can stand alone while bound morphemes cannot exist without base words. Among the free morpheme examples are rumah, sekolah, dan jalan. These words can stand alone and can make their own meaning without the help or words or other morphemes. In words tersenyum, memasak, and berjalan, there is a morpheme bound for each word, ter- as is tersenyum, me- as in memasak, and ber- as in berjalan.

The words in Bahasa Melayu are comprised of the basic word and derivative forms. The basic word is the smallest word that does not receive any remuneration while the derivative form is the form resulting from the process of expanding the basic word through various ways of forming words. This process is called a derivation. In the process of derivation, or the addition of certain language units, there are changes in the meaning and grammatical structure. The derivation is divided into prefixes, suffixes, inserts, overlays, empty morphemes and flexible forms. This study only focused on prefixes and suffixes.
The first prefix needs to be address is prefix me-. The prefix me- is a prefix that forms an active verb, whether transitive or non-transitive. This prefix has four variances namely me-, mem-, men-, and meng-. The first variant of meN- depends on the first letter of the stem word that joins with it. The prefix is influenced by the first sound or phoneme in the stem word beginning with letters l, m, n, ny, ng, r, w, and y as in melawan, memasak, menanti, menyala, menganga, merayu, mewangi, meyakin(kan). Prefix meN- is transformed into mem- when it joins the stem words beginning with b, p, f, f, and v as in memberi, membantu, membilas, memfitnah, memveto, mempelawa, and mempraktik. When the stem words are borrowed words beginning with t, prefix men- is added to those words as in mentadbir, mensistesis, menstabil, and mentranskripsi. The prefix men- only affects and changes the stem words beginning with s and t as in menyaman (saman), memanda (tanda).

The above illustrations shows the uniqueness of Bahasa Melayu in its word derivations. The rules of adding affixes are unique to the ones in Bahasa Indonesia, not all rules are similar between the two languages. These language rules may hinder the students’ writing. Therefore, an investigation to evaluate the Indonesian students academic writing in Bahasa Melayu can revealed findings about the nature of students’ writing.

2. METHODS

This study utilized the descriptive content analysis. We collected data from six Indonesian students’ first submitted draft dissertations written in Bahasa Melayu. All dissertations were written as a requirement for doctoral level completion. The dissertations were written in the management, education, and social sciences discipline areas. To analyze the data, we first identified the incorrectly used suffices in each dissertation. Then, we grouped the errors into specific categories. Finally, the number of occurrence per category was counted to determine the main problems of the students in mastery of words in academic writing in Bahasa Melayu.

To understand the rationales of the challenges the students faced in using affixes in Bahasa Melayu in dissertation writing, we conducted a focus group discussion the students about their struggles and difficulties in academic writing of Bahasa Melayu. The focus group instead of individual interview was opted due to the similar characteristics shared by the students. All of the students are education professionals practicing in Sumatra and Jawa, Indonesia.

The discussion was conducted in one session, as it was near impossible to gather all six of the students at the same time due to their difference origin provinces and clashing schedules. The session lasted for three hours in which we managed to collect enough data to revealed the rationales of students’ difficulties in writing their dissertations. The purpose of the research was introduced to the students and their participation was voluntary. The discussion was aurally recorded with students’ consent.

3. RESULTS AND DISCUSSION

3.1. The Participants’ Profile
The data were collected from six dissertations by utilizing a content analysis. The students were invited to a focus group discussion to evaluate the rationales the face in dissertation writings, specifically on the grammatical aspects of Bahasa Melayu. Table 1 below illustrates the profiles of the students who participated in this research.

Table 1. Students’ Profile

<table>
<thead>
<tr>
<th>Student</th>
<th>Gender</th>
<th>Age</th>
<th>Province Origin</th>
<th>Discipline</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Female</td>
<td>33</td>
<td>Riau</td>
<td>Accounting</td>
</tr>
<tr>
<td>2</td>
<td>Male</td>
<td>50</td>
<td>Sumatera Barat</td>
<td>Management</td>
</tr>
<tr>
<td>3</td>
<td>Female</td>
<td>46</td>
<td>DIY</td>
<td>Education</td>
</tr>
<tr>
<td>4</td>
<td>Female</td>
<td>39</td>
<td>Jakarta</td>
<td>Marketing</td>
</tr>
<tr>
<td>5</td>
<td>Male</td>
<td>42</td>
<td>Jawa Tengah</td>
<td>Social Science</td>
</tr>
<tr>
<td>6</td>
<td>Female</td>
<td>41</td>
<td>Sumatera Barat</td>
<td>Accounting</td>
</tr>
</tbody>
</table>

3.2. Incorrect Use of Prefices and Suffices

From the identification of errors, we found numerous errors from each dissertation. Some of errors were due to the transfer of the prefix and suffix rules of Bahasa Indonesia. For example, *diwakili* is grammatically correct in Bahasa Indonesia but not in Bahasa Melayu. Stems ending with *l* (as in *wakil*) should not be followed by suffix *-i* in Bahasa Melayu. Another example is *diserahi*. The discussion of the errors is detailed out below.

3.2.1. Prefix *Men- and Meng-*

When prefix *men-* is paired with the stem that starts with *t*, the errors were frequently found when forming the words. The details of the errors can be seen in Table 2 below. This error is due to the application of Bahasa Indonesian grammatical rules to drop *t* for this case. Adopting the rules of Bahasa Indonesia has hindered the students’ writing of Bahasa Melayu.

Table 2. Prefix *Men-* and *Meng-*

<table>
<thead>
<tr>
<th>First Letter</th>
<th>Stem</th>
<th>Error</th>
<th>Correction</th>
</tr>
</thead>
<tbody>
<tr>
<td>t</td>
<td>Tafsir</td>
<td>Menafsir</td>
<td>Mentafsir</td>
</tr>
<tr>
<td></td>
<td>Terjemah</td>
<td>Menerjemah</td>
<td>Menterjemah</td>
</tr>
<tr>
<td>k</td>
<td>Kabul</td>
<td>Mengabulkan</td>
<td>Mengkabulkan</td>
</tr>
</tbody>
</table>
3.2.2. Suffix –i

Another common error found in the dissertation is the use of suffix –i. To indicate action, suffix –i is added to a number of words in Bahasa Indonesia but not in Bahasa Melayu. Table 3 shows the patterns of error documented in the dissertations.

Table 3. Suffix –i

<table>
<thead>
<tr>
<th>Stem</th>
<th>Error</th>
<th>Correction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jawat</td>
<td>Menjawati</td>
<td>Menjawat</td>
</tr>
<tr>
<td>Ziarah</td>
<td>Menziarahi</td>
<td>Menziarah</td>
</tr>
<tr>
<td>Kritik</td>
<td>Mengkritisi</td>
<td>mengkritik</td>
</tr>
<tr>
<td>Salah</td>
<td>Menyalahi</td>
<td>Menyalah</td>
</tr>
</tbody>
</table>

3.2.3. Suffix -kan

Suffix –kan is among the most commonly used suffix to create verbs in Bahasa Indonesia. In Bahasa Melayu, however, suffix –kan is not a necessary addition to the same stem. Table 4 illustrates how the students used their Bahasa Indonesia’s knowledge of adding this suffix and apply it to the words in Bahasa Melayu.

Table 4. Suffix -kan

<table>
<thead>
<tr>
<th>Stem</th>
<th>Error</th>
<th>Correction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sesuai</td>
<td>Menyesuaikan</td>
<td>menyesuai</td>
</tr>
<tr>
<td>Salah</td>
<td>Menyalahkan</td>
<td>menyalah</td>
</tr>
<tr>
<td>Tanda</td>
<td>Menandakan</td>
<td>menanda</td>
</tr>
<tr>
<td>Pandang</td>
<td>Memandangkan</td>
<td>memandang</td>
</tr>
</tbody>
</table>

3.3. Focus Group Discussion

The findings from the focus group discussion revealed the four main themes about the challenges faced by the students. The first theme was lack of emersion. All of the students in the group agreed that studying in Malaysia does not automatically immerse them in the context of Bahasa Melayu. The nature of PhD programs they were enrolled in allowed them to only stay in Malaysia for a short period of time for each visit. During the visit, they mostly only communicated with their supervisors. The lack of communication practices with speakers of Bahasa Melayu hinders their learning of Bahasa Melayu.
Student 5:
Whenever I come to Malaysia for consultation, I only stay 2-3 days only. I have commitment back home that doesn't allow me to extend my stay in Malaysia. All my friends in this graduate program are from Indonesia. I still don’t really know how to speak Bahasa Melayu.

Student 4:
I don't know how to speak Bahasa Melayu. In Malaysia, my housemates are from Indonesia. I do not have friends from Malaysia. My supervisor speaks in English mostly. I understand English, it is just I can’t write. My exposure to Bahasa Melayu is when I needed to interact with the admin staff on campus and a lot of them are actually accommodating, that I am not embarrassed to ask them again if I don’t understand.

The second theme revealed was lack of confidence. The students repeatedly mentioned that they are not confident to speak in Bahasa Melayu. They need to stop and think for sometimes to think if the words are correct. Many too many mistakes when speaking felt embarrassing to them.

Student 6:
I am not confidence to speak in Bahasa Melayu. I made a lot of mistakes everytime I speak. My supervisor doesn’t understand what I say. But my supervisor understands Bahasa Indonesia so I communicate a lot in Bahasa Indonesia.

Student 2:
Sometimes, I don’t understand what my supervisor said but I nodded to confirm or just said yes. It is embarrassing to ask him to repeat so many times. So sometimes I just pretended I understood.

Student 3:
I don’t know a lot of Bahasa Melayu words. I can express myself very well in Bahasa Indonesia. In Bahasa Melayu, I found it difficult to speak because I do not know a lot of words. I tend to keep quiet for a long time to think what to say before I know how to say it. It may seem that I am a quiet person but I am really not. I just don’t know what words to use to speak.

The third theme documented to was the differences between the spoken language and the written language. This theme was discussed extensively. The students felt that this aspect contribute the most to the hindrance in writing dissertation.

Student 1:
I can understand and speak Bahasa Melayu a little bit but it is only the spoken language that I master, because I am from Padang. But the written language, I get confused sometimes.
Student 3:
I feel that in Bahasa Melayu, the spoken language is very different from the written language. The words used to communicate sometimes are very short or shortened.

The last theme we drew from the discussion was the shared similarities between Bahasa Melayu and Bahasa Indonesia.

Student 5:
I feel that I understand and know Bahasa Melayu because it is very close to Bahasa Indonesia.

Student 6:
I realize that I used a lot of Bahasa Indonesia words in my writing but I think they are pretty close to one another.

Student 1:
My professor corrected my words sometimes. I don’t see the errors until someone else pointed out to me. I guess I have been using a lot of Bahasa Indonesia in my writing. I don’t realize about the differences.

Student 2:
I have always been pursuing education in accounting, so language is not my forte. I have never studied the formal Bahasa Melayu. I have been using a lot of Bahasa Indonesia words and grammar in my writing because I don’t really know how to write in Bahasa Melayu.

4. CONCLUSION

This study investigated the errors in the dissertations of Indonesian students written in Bahasa Melayu. The dissertation content analysis revealed that students made grammatical errors in their writing. The errors analysed were focused on the affixes used by the students. The findings indicated that the students make errors due to the negative transferring process from Bahasa Indonesia into Bahasa Melayu. When the transfer is positive, the students are benefitted from the knowledge of their first language (i.e., Bahasa Indonesia). This positive transfer usually takes place when the two language share similarities. However, the grammatical rules of the two languages are different, negative transfer can occur. This transfer can interfere with the students’ writing leading to extensive errors produced in the dissertations.
The findings from the focus group discussion showed that the students’ difficulties in writing in Bahasa Melayu are due to four main aspects, namely lack of immersion in Bahasa Melayu, lack of confidence, the differences between the spoken and written language of Bahasa Melayu, and the differences between Bahasa Melayu and Bahasa Indonesia. These empirical revelations are key contributors to Bahasa Melayu language learners, especially graduate students from Indonesia. These discussions stemmed on the importance of immersion by communicating in the target language; as the old saying suggests that practice makes perfect. Importantly the discussion group agreed that the students should not rely on their knowledge of Bahasa Indonesia grammatical rules. There are significant differences between the two languages. Therefore, relying entirely on the Bahasa Indonesia knowledge of writing leads the students writing in Bahasa Melayu to contain an extensive number of errors; hence, posing questions on the quality of their writing.

This research suggests two implications, one for the Indonesian students studying in Malaysia and the other for the host higher education institutions in Malaysia. As international students, they need to be aware on the demand to perform and to show mastery of the target language, in this case Bahasa Melayu. They will be able to show such quality by improving their language skills in Bahasa Melayu. Improvement can be achieve by communicating in the target language and by reading a lot of published work in the target language. The students need to cross their comfortable level and be more confident to use Bahasa Melayu, instead of relying on Bahasa Indonesia.

The higher education institutions in Malaysia need to be aware about the drawbacks of their international students in mastery of Bahasa Melayu. There is a good size of population of international students from Indonesia pursuing undergraduate and graduate programs in Malaysian universities. The institutions need to facilitate the language learning for the students by providing Bahasa Melayu courses or by assigning them to a language mentor. When this facilitations are provided, the institutions can claim the responsibility of the students to produce quality writing for their dissertation.

5. REFERENCES

Wasley, P. (2008). Portfolios are replacing qualifying exams as a step on the road to
CONTENT CREDIBILITY OF MOBILE APPLICATIONS FROM USER PERSPECTIVE

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ABSTRACT

Regarding the digital media context, the connectivity and the ability to obtain information is important not only what people know, but how they know what they know. As the sudden explosion of digital media content and access devices in the last generation especially on mobile applications, its credibility is important. Not just the mobile applications credibility but its content also gives impact to enhance the popularity, bring an impression, and share the experiences to the user. One of the growing mobile applications that attract the most users nowadays is Webtoon, the mobile application for a global digital free comics service platform. Previously Webtoon is a website, then it was adapted to be a LINE Webtoon mobile applications that offers daily updated over 200 online comics for free to serve the user based on mobile devices. This mobile application has been downloaded by more than 10 million users and has been reviewed by 828,127 users on Google Play Store. By conducting qualitative approach, this study applied the credibility of mobile applications focus on its content from user perspective using Fogg’s Prominence Interpretation Theory (PIT). This on-going study is obtained data from the participant observation method and in-depth interviews and using snowball sampling to recruit the informants. This study explores the involvement, topic, task, experience, and individual differences as a part of prominence, and also identifies the assumptions, skill/knowledge, and context as a part of an interpretation. The impact of content credibility would be discussed from the process of noticing prominent elements and interpreting the users experience from the content of mobile applications to enhance the users satisfaction.

Keywords: Content Credibility; Interpretation; Mobile Applications; Prominence; User.

1. INTRODUCTION

The term credibility increasingly becomes important issue since the communication process, service, commerce and personal data goes online (J. Lazar, 2007). As the sudden explosion of digital media content and access devices in the last generation, now people can access everything they need by portable, accessible, and interactive devices that can do both delivery and formation. There is now more information available to more people from more and
variety sources than at any time in human history. The wide-scale access and multiplicity of sources that ensure the vast information availability also make assessing their credibility extremely complex. The key elements of credibility such as trust, believability and information bias become critical as individuals process the information in their lives gleaned from digital media (Flanagin & Metzger, 2008).

Nowadays, people recognize that some sources have more than ordinary competence in particular spheres (Rieh, 2007). There are cognitive authorities that being the subset of people or information perceived to be credible, not only possess competence and trustworthiness but also influence thoughts deeply (Rieh, 2007). On the book Second-hand knowledge: An inquiry into cognitive authority, Wilson states that our cognitive authorities are clearly among those we think credible sources, but we might recognize someone as credible in an area even though he/she did not in fact have any influence on our thoughts (Wilson, 1983). On digital era, the internet has already become an integral part of everyday life for most of the world’s population. The source of information or anything people need is not always look like a human even it came from human’s thought. There are some sources that could access just by using the fingers to scroll or tap the flat screen.

As the mobile communication technology development, the people habit to use media expands from static to mobile device. As smartphones are equipped with various multifunctional applications, our time was spent mostly in front of the mobile phone flat screen to do various activities (Irwansyah, 2015). Nowadays people just using their fingers to search the information or anything they need. Smartphones have moved beyond being just ‘phones’ though, smartphones could be analogized as the remote controls for human lives. People can check the update news or event, watch a full-length movie, buy the groceries, edit the photograph before uploading to social media, and even find love through online dating wherever and whenever they go or doing other things.

More than half of the world’s population now carries a powerful connected device wherever they go including in Indonesia. The 2017 Global Digital Reports identifies some prominent finding about smartphones users such as: More than half the world now uses a smartphone; Almost two-thirds of the world’s population now has a mobile phone; More than half of the world’s web traffic now comes from mobile phones; More than half of all mobile connections around the world are now ‘broadband’; More than one in five of the world’s population shopped online in the past 30 days (Kemp, 2017). Digital marketing research eMarketer predict more than 100 millions Indonesian people become the active users of smartphone on 2018 (Rahmayani, 2015). eMarketer survey result shows that almost all of the users of smartphones and tab have mobile applications on their mobile device (eMarketer Brief: For Mobile Device Users in Indonesia, Apps Are a Must Have, 2016). The finding from GfK Indonesia states that 97.8% from the smartphones and tablet’s users sample approximately use 25 active mobile applications on their devices (Mobile Apps Market Study in Indonesia, 2016). There are some categories for mobile applications that classify mobile applications into 17 categories. The result also mentions that young age users group (23-32 years old) are more active
using mobile applications. In other words, using apps is more common than using web browsers (see Figure 1) (Mobile Apps Market Study in Indonesia, 2016).

Figure 1. The Penetration and Profile Users of Mobile Apps.

Apps (short for mobile applications) are software applications for use on smartphones (Straubhaar, 2012). As the mobile applications’ function being important, the amount of mobile applications nowadays growth more than a million since there are 2,93 million apps in Appstore and more than 2 million apps on Google Play Store in 2016 (Rizal, 2016). Apps were first introduced in early 2007 with the Apple iPhone. Since then, they have become increasingly popular as other smartphone platforms and now tablet computers have embraced this form of accessing content. Indeed, mobile applications use has been a core feature in the broader move away from desktop computers toward mobile computing on handheld device (Purcell, 2011).

One of the growing mobile applications that attract for the most users nowadays is Webtoon. Based on the survey from GfK Indonesia on 2015, Webtoon is listed to one of Book and Reference Top Apps Category and being the first place on stories sub-category (Mobile Apps Market Study in Indonesia, 2016). Previously Webtoon is a website by Daum and Nate then followed by Naver that succeed to spread the web version of webtoon globally (Griffith, 2016). Afterward webtoon was adapted to be a LINE Webtoon mobile applications that offers
daily updated over 200 online comics for free to serve the user based on mobile devices. This mobile application has been downloaded by more than 10 million users and has been reviewed by 828,127 users on Google Play Store.

Webtoon is the combination of two words: web and cartoon that was first known as a term used to describe South Korean webcomics or manhwa that are published online (Open Access Articles - Top Results for Webtoon, 2014). Lynn in Jang (2017) mentions that webtoon are also known as mobile cartoons, digital comics, web manhwa in Korean, and keitai manga in Japanese (Jang, 2017). The webtoon genre firstly created in Korea as a new manhwa format that supported by digital platform and the networks of web portal sites and mobile phones (Jin, 2015).

The digital format of manhwa (webtoon) different from scanned version of print comic on website. The earliest incarnation of the webtoon was made from an original comic that was uploaded to the Internet and formatted into a horizontal layout (Griffith, 2016). Most webtoons are created digitally, often in long-strip format for scroll-down viewing on computers or smartphones (Je, 2015). The manhwa transformation into digital format also enriched by sound and motion into previously static comics. Webtoon creators began experimenting with new digital effects such as give the sound effect, added motion image (.gif), 3D animation and flash effects. One of the current trends is to add background music to a series of panels (Griffith, 2016). Some creator even make the smartphone vibrate when readers scroll to a certain scene (Je, 2015).

The increase of digital content consumption of webtoon has had a big impact on fostering webtoon production. In the beginning of webtoon production, the main contents of webtoon were social issues from everyday life, such as poverty, cyber bullying, suicide, youth unemployment, and domestic violence. These works became a new genre called il-sang-toon meaning webtoons dealing with everyday life stories (Jang, 2017). Though the contents of webtoon still dominated by South Korean webtoon artists, the origin of webtoon came from, as the popularity of webtoon increased in their country, professional comics artists joined and contributed to the diversity of webtoon including in Indonesia. Some comics rate number one on the popular comics genre on the LINE Webtoon such as Pasutri Gaje and Terlalu Tampan (see figure 2):
The increase of dependency on mobile applications follows by the rise of mobile applications sum in many categories. According to this fact, the risks of lack or poor credible mobile applications become real. Thus the credibility of apps is essential (Kakol, Jankowski-Lorek, Abramczuk, Eierzbicki, & M., 2013). Not just the mobile applications as the platform, the content credibility also important to enhance the popularity, bring an impression, and share the experiences with the user.

Users usually get the information about games, social media, and books and reference mobile applications from app store. While shopping and transportation more from recommendation especially from friends and relatives (Mobile Apps Market Study in Indonesia, 2016). Overall functional aspect is the main reason for apps downloading. However, youth also tend to download based on recommendation, but getting older, feature aspect is also come into consideration for downloading (Mobile Apps Market Study in Indonesia, 2016).

Users download different apps for variety of reasons. Three reasons why apps are perceived useful are: it’s function (the function of the apps suitable for the users), makes life easier (easy to use, easy to understand, and easy to navigate), and social approval (Mobile Apps Market Study in Indonesia, 2016). The term social approval related to two sentences: trustworthy apps and most of people use the apps. Usually the rate and stars from the app store (Google Play Store or Appstore) become the basis for the users to choose the mobile applications, besides that credibility is also important to be the qualification of social approval.
There exists no one clear definition of credibility that has arisen from this heritage (Flanagin & Metzger, 2008). A closely related concept to credibility is trust. Credibility is defined as believability. Credibility is also closely related to concepts such as quality, authority, as well as persuasion (Fogg & Tseng, 1999). Individuals may employ credibility as an additional filter to select items from a pool of information that have been judged as of being high quality (Rieh, 2007). The vast majority of researchers identify two key components for credibility: trustworthiness and expertise, which both have objective and subjective component (Fogg & Tseng, 1999). Trustworthiness is a receiver judgment based primarily on subjective factors, but can include objective measurements such as established reliability (Flanagin & Metzger, 2008). Credibility (i.e., ethos) can be thought of as comprising two sub-dimensions: competence and character (McCroskey, 1981). As initial working definition, this study propose the content credibility of mobile applications (LINE Webtoon in this case) as the key step to enhance the popularity, bring an impression, and share the experiences with the user of mobile applications. The impact of content credibility would be discussed from the process of noticing prominent elements and interpreting the users experience from the content of mobile applications to enhance the users satisfaction.

There are several methods can be used in order to evaluate credibility in academic field. Surowiecki propose “wisdom of crowds” approach whereas one can aggregate distributed opinions on the credibility of content (Surowiecki, 2005). Another approach stemming from an under-researched, yet potentially important theory called Prominence-Interpretation Theory (PIT) that could try to increase the prominence of the chosen content-features to reduce the impact of the content presentation (Fogg B. J., 2003). Fogg identifies that two things happen when people assess credibility online called prominence (when the user notices something) and interpretation (when the user makes a judgments about it). Those two components bound over one to another, since there is no credibility assessment if one or the other does not happen. In other words, for those who assess a website’s credibility, must first notice some element of the online experience. However the study of online credibility still limited to understanding about how users assess credibility online (Fogg B. J., 2003). The evaluation study focused on (1) the site element will be noticed or perceived and (2) the user’s evaluation of a site element whether is good or bad.

PIT posits at least five factors that affect prominence and three that affect interpretation (see Figure 3). The first component of PIT is prominence (the likelihood that a website element will be noticed or perceived). The factors affecting prominence are: (1) Involvement of the user (includes motivation and ability to evaluate websites); (2) Topic of the site (the website’s topic); (3) Task of the user (for the example: seeking information, making the transaction, etc); (4) Experience (beginners or experts); (5) Individual differences (Fogg B. J., 2003). Fogg states that involvement, especially in terms of motivation, could be the most dominant factor affecting prominence. In addition to the five factors that listed, there could be other factors are likely to play a role in Prominence (Fogg B. J., 2003)
The three factors that PIT posts to affect interpretation are: 1) assumptions (i.e., culture or past experiences); 2) the user’s skills/knowledge, usually related to the areas as competency in the subject matter of the website; 3) context, (i.e., user’s environment, user’s expectations, and situational norms). PIT posts that users do not interpret or evaluate website elements in the same ways (Fogg B. J., 2003). User’s interpretation to the website elements usually repetitive and the unconscious process, which will lead the user to make the assessment about the website or the mobile applications they open. Once something is noticed on a website or in an application, it is interpreted by the user. The interpretation may be conscious, and hence explainable, or it may be unconscious (tacit) and difficult to articulate (George, Giordano, & Tilley, 2016). George, Giordano & Tilley argue there are three factors affect the interpretation: what users know about the situation, the larger environmental context of the activity, and any assumptions the individual bring to the situation (George, Giordano, & Tilley, 2016).

2. METHODS

By conducting qualitative approach, this study explores the involvement, topic, task, experience, and individual differences as a part of prominence, and also identifies the assumptions, skill/knowledge, and context as a part of an interpretation. The focus of the exploration is on the content of mobile applications (LINE webtoon in this study case). This ongoing study is obtained data from the participant observation method and in-depth interviews with two informants who were recruited through snowball sampling.

The criteria of the informants determined are the LINE Webtoon users for more than six months, age around 23-32 years old - regarding this group age is the skew on the profile of mobile applications downlosers (Mobile Apps Market Study in Indonesia, 2016). In addition, the informants should be active to give the review/comment for the apps/content of the apps (webtoon comic).

After did in-depth interview to the two (2) informants: ZH and RP, this study using three steps coding (open coding, axial coding followed by selective coding) to classify the
informants’ statement and find the indicator of dimension and concept that the informants use to assess the LINE webtoon content credibility. Using narrative analysis, the finding shows that both factors - prominence and interpretation - get noticed from the informants to assessed the content credibility of mobile applications LINE webtoon as one of mobile apps. Those two factors are linked and difficult to separate one to another, both factors helped to evaluate the credibility. On the content context, regarding the main contents of webtoon were social issues from everyday life, the emphasizing of content credibility perceived by the informants when the comic’s story happened in the informants real life.

3. RESULTS AND DISCUSSION

Both factors - prominence and interpretation - get noticed from the informants to assessed the content credibility of mobile applications LINE webtoon as one of mobile apps. Those two factors are linked and difficult to separate one to another, both factors helped to evaluate the credibility. The two components happen when people assessed the credibility was added by the content of the media itself. The ideas described consistent with the findings through interviews with the two informants (ZH and RP). The first informant, ZH, like to read printed comics since the informant on the junior high school, the informant’s favorite comics were Conan and Death Note. Since the printed comics rarely founded, one of ZH’s friend give ZH the recommendation of mobile applications LINE Webtoon that has many fun comics to read and it’s free of charge.

ZH started reads the LINE Webtoon as mobile apps from 2015, and get addicted to LINE webtoon’s content; ZH admires the webtoon digital features too like the motion effect (.gif) and the backsound of some scene. ZH likes to give comments on the story when ZH get crushed to the characters. One of webtoon that ZH like the most is Miss Abbot and the doctor, the story of couple in the middle era. ZH give the comment on the gender-bend episode, when those two main characters exchange their personality, Miss Abbott being the doctor and the opposite. The conflict happen when those two characters need to learn each other personality when they exchange. What is ZH like the most from this episode is the inspiration of the story came from the comment from the webtoon users. ZH feels like the creator appreciate the review and comment that given by the users.

The other informant, RP, also emphasized the content as the most reason RP enjoys the apps. RP enjoy reads the LINE Webtoon since it was an add-on LINE Apps. RP firstly knows the LINE Webtoon mobile applications from the advertisement on the television. RP enjoy read webtoon on working breaktime, on the way to the office, and keep reading webtoon on holiday. RP reads webtoon two to three times a day. Killing time is the most reason why RP reads Webtoon, aside the story that RP admires. Different with ZH, RP only reads one comic webtoon and repeat it again and again. RP crushed to webtoon Pasutri Gaje, the household story of Mas and Adek the young public servant couple. The favorit episode of Pasutri Gaje that RP adores most is pindah rumah, RP says that the conflict of the episode’s story similar with RP condition when RP moving to the new house with RP’s mate. Both of ZH and RP statements indicate that the proximity with the content of webtoons that dealing with everyday life stories gives impact to the content credibility of mobile applications LINE webtoon that enhance the popularity, bring
an impression, and share the experiences with the informants a user.

4. CONCLUSION

The finding of this study enhances the implementation of PIT theory to assess the mobile application credibility from user perspective. The important factor besides the involvement as part of prominence is the context as part of interpretation. The theme of LINE webtoon content that dealing with everyday life stories is important for the informants to assess the credibility of this mobile applications. Regarding this study still on-going for the participant observation method to get the richness and uniqueness of the result, the impact of credibility would be discussed from the process of noticing prominent elements and interpreting that usually happen on the new aspects of mobile application to reach satisfaction of users. For future work of this study propose on increasingly specific issues and expanding topics that have addressed in this study. It could be more focuses on the variation of content including the add-ons feature of digital effect to enhance the users experience to assess credibility of mobile applications.

5. REFERENCES

9. Bibliography


Employment Prospect of Persons with Disability: the Myth and Reality

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ABSTRACT

Persons with disabilities (PWDs) still remain to be among the most vulnerable group in Malaysia. PWDs' employment prospect seems to be limited due to their impairment, especially in managerial and professional positions. Investigation into the community’s perception of PWDs employment prospect and barriers is important to help change negative misconceptions towards PWDs and promote social inclusion. The main objective of the paper is to investigate community’s attitudes towards disability and to examine the effects of these attitudes on PWDs’ participation in the country’s workforce. The PWDs in this study are confined to physical, hearing, visual, and those with multiple disabilities. Over 800 respondents were surveyed in the study ranging from the general public, private and government sectors and students. Respondents perceived that employers should accept PWD workers in the mainstream job however, visual and physical impairments were perceived to have less employment opportunities as compared to speech and hearing impairments. Findings from this study also revealed that there is stigma and prejudice against PWDs. Hence more effective efforts and awareness campaigns by relevant ministries and stakeholders are required to reduce this stigma and to empower this vulnerable group.

Keywords: Community; Employment; Perception; Persons with Disability

1. INTRODUCTION

Public attitudes towards disability are influenced by myths and misconceptions. The public always assumes that Persons with Disabilities (PWDs) are very independent, blind people have six sense, deaf people can read lip read, wheelchair users have poor mobility, and people with disabilities are very sickly. Lack of knowledge on PWDs leads to the twin problem of negative perception and barriers between non-disabled and disabled people. In 2016 the World Health Organization (WHO) and World Bank (WB) reported around 15% of the world's population (1 billion people worldwide) are PWDs. With the increase in chronic diseases and war conflicts in some countries over the years, this percentage is expected to be higher. With respect to location, 80% of the PWDs are in developing countries while 20% live in developed countries (World Health Organization, 2011). Over 100 million families in developing countries are facing conflicts related to disability. With increasing numbers of PWDs, issues such as discrimination, prejudice, lack of education opportunity, limited access to public services and facilities and employability became pertinent.
With the aim to ensure and promote freedom for PWDs without discrimination of any kind based on disability, the Convention on the Rights of Persons with Disabilities (CRPD) has come into force internationally on 13 December 2006. The Convention views disability as a “pathology of society” as the result of societies failure to be inclusive and to accommodate individual differences. It is the societies that need to change and the Convention provides a road map for societies to change. Following the CRPD, the Incheon strategy was introduced by the Economic and Social Commission for Asia and the Pacific (ESCAP) to protect the rights of PWDs (Han, 2012). This new strategy with the slogan “Make the Right Real” started from 2013 - 2022 with 10 goals. The top of the strategy is to reduce poverty and enhance work and employment prospect, enhance access to the physical environment, strengthen social protection and expand early intervention on education of children with disabilities (United Nation, 2012).

Malaysia is also one of the countries that signed the CRPD declaration on 8 April 2008. As part of the CRPD member, all actions against the right of the PWDs must be parallel with the rules and regulations set by the convention. The Parliament of Malaysia has endorsed Person with Disability Act (2008) to promote equality among the PWDs in the society (ERT Country Report Series:2, November 2012). Although this Act is supporting the betterment of PWDs life, however, it lacks in punitive provision in providing remedy to breach the rights of PWDs and was non-enforceable in certain conditions and have not fully protect the life of PWDs in Malaysia (Abdullah, Hanafi & Mohd Hamdi, 2017).

The Department of Social Welfare Malaysia (DSWM) under the Ministry of Women, Family and Community Development of Malaysia categorized PWDs into seven (7) categories, which are based on the PWD act (2008) as described per below:

These 7 types of PWDs are being accepted and have been used widely as an official criteria of PWDs in Malaysia. According to DSWM the definition of Visual impairment is referred to individuals who are visually impaired or have low vision in either one eye or both eyes even with visual aids such as spectacles or contact lenses. There are two categories of visual impairment which is blind and low vision. Hearing impairment is individual who are unable to hear clearly without hearing aids or unable to hear even with hearing aids. Physical disability is individual who suffers from the inability of the body to function normally. Physical disability that does not affect functions such as handicapped one finger, have six fingers or more and without or imperfect earpiece is not categorized as physical disability. Learning disability is individual whose intelligence is imbalanced with his or her biological age. People with down syndrome,
inert, intellectual disabilities, autism, specific learning disabilities (dyslexia, dyscalculia, dygraphia) and global development delay fall under this category. Speech impairment is individual able to hear but with speech problem. Mental disability is individual with severe/chronic mental disorder and undergone treatment or was given diagnosis by psychiatrist for at least 2 years. As a result of the illness, they are still unable to function either partially or fully in relation to himself or herself or with the community even after undergoing psychiatric treatment. Multiple disability is an individual who has more than one type of disability. For example, an individual who has 2 types of disabilities such as vision and hearing disabilities (Guidelines: Registration of Person with Disabilities, Department of Social Welfare of Malaysia, 2012). PWDs registration shows an increasing pattern in the number of registration since 2009 until the end of 2014. In 2015 the number dropped to 365,677 because it has been revised accordingly based on PWDs’ death (DSWM, 2016).

The Department of Social Welfare of Malaysia under the Ministry of Women, Family and Community Development of Malaysia plays an important role for PWDs development in Malaysia. The department is being entrusted by the government to take care of the society developments including for PWDs. This department is the only department that handles registration of PWDs in Malaysia and a yearly report on PWDs will be produced by them to be presented to the public. As a trusted department, the data, numbers, and policies issued were considered as an official from the government (Department of Social Welfare Malaysia, Official Website, 2016).

The department provide facilities and privileges to PWDs as mentioned in the guidelines. The Disabled Allowance Worker gives an allowance of RM350 per month to PWDs worker whose income is less than RM1200. The Launching Grant program provides financial assistance for PWDs to participate in small business and entrepreneurship with seed money of RM2700. The department also assists PWDs with financial aid to purchase supportive equipment like wheelchair, artificial leg, blind stick and others. Apart from this, aid is also given to PWDs who are unemployed with an allowance of RM200 per month. PWDs with visual impairment are given full sponsor to purchase white cane and braille machine (Department of Social Welfare Malaysia, Official Website, 2016).

There are programs introduced by the Department of Social Welfare Malaysia with the aimed to promote self-developments and social inclusion between PWDs and community. Such programs are Community Rehabilitation Program (CRP), institution services, sheltered workshop, Disability Equality Training (DET) and job coach information centre@PLPP. Community RP is pioneered and inspired by World Health Organization (WHO) with an objective to improve the misconception of the society towards PWDs. It also urges social interaction between PWDs and society. The program has been organized once in 1984 at Terengganu, with the involvement of 55 PWDs. The program is still continued until today and the candidate will be giving an allowance of RM150 per month for this program (Department of Social Welfare Malaysia, Official Website, 2016).

Another program under CRP is “one stop center” that has been introduced with an objective to create integration between the community and PWDs in each state. This center will provide
Services to PWDs to facilitate them and the community to get information, advisory services, current need and training (Department of Social Welfare Malaysia, Official Website, 2016).

Institution services program is also important for PWDs. The institution provides care service, rehabilitation and training opportunity to PWDs. Currently, there are 11 institutions which are Taman Sinar Harapan (7), Bengkel Terlindung (2), Pusat Latihan Perindustrian dan Pemulihan Bangi (1) and Pusat Harian Bukit Tungku (1). That institution is under the maintenance of DSWM. Services, as well as training, is including for all types of disabilities (Department of Social Welfare Malaysia, Official Website, 2016).

A sheltered workshop is specific to PWDs who are unable to get a job in the open market. The aim of this workshop is to create job opportunity among PWDs and to improve quality, capacity, knowledge, and skills of PWDs in getting a job. This application is open only for a learning disability and physical disability (Department of Social Welfare Malaysia, Official Website, 2016).

DET is a comprehensive method conducted by DSWM to understand the issues related to PWDs. The training is being used worldwide which is based on a social model perspective. The aim is to create the inclusiveness among the community as well as to change the negative perspective and perception of the society to PWDs. At the same time, it is also done to identify the origin of the problem regarding PWDs. The participant can be non-PWDs and PWDs as well (Department of Social Welfare Malaysia, Official Website, 2016).

The Job Coach information center@PLPP is established in 26 April 2016 to give support on employment to PWDs. Under this, PWDs will be trained on how to write a resume, filling up the application form, support on before and after getting a job and make a follow up to PWDs. (Department of Social Welfare Malaysia, official website, 2016)

Disabled Person Policy 2016 - 2022 (DPP)

DSWM has introduced the Disabled Person Policy (DPP) for 6 years, 2016 – 2022. Under this policy there are 4 main objectives:
1. To provide recognition and acceptance of the principle that PWDs have the same rights and opportunities for full participation in society.
2. To ensure that PWDs enjoy the rights, opportunities and equal access under the law of the country.
3. To eliminate discrimination against a person because of his disability; and
4. To educate and raise public awareness about the rights of PWDs.

To ensure the success of these objectives, the policy strategy focuses on 15 areas; advocacy, accessibility, health, rehabilitation, education, employment, personal safety and social protection, support services, social, human resource development, community involvement, research development, housing, children with disability and women with disability (Department of Social Welfare Malaysia, Policy/Plan of Action: Disabled Persons Policy, 2016).
National Council for PWDs
The national council of PWDs is stated under the section 3(1), Person with Disability act 2008 (Act 685) to discuss the issues regarding PWDs in top management. The function of this council is to inspect suitable policy and national plan towards PWDs in this country. The council is also responsible to develop the program and strategies to educate society in PWDs awareness (Department of Social Welfare Malaysia, Official Website, 2016).

Even with the various policies and efforts by the government to promote PWDs development, most PWDs in Malaysia are facing economic, social or employability challenges and problems. The occurrence of discrimination against PWDs is still prevalent (Khoo, Tiun & Lee, 2013). These challenges rose as a result of the dominant charity-orientated and segregated approaches in providing services to PWDs. The segregation started in primary school when the non-disable pupil and PWDs pupil were separated by special school or class (Jayasooria, 1999). According to Kim (1991, 1995); Ooi (1994a,b,c,1995); Sazli Shaari (1994); Lim (1993); Thanasayan (1995a,b,1996) as cited in Jayasooria (1999), PWDs should not be excluded from the economic development planning and implementation. Discrimination among the PWDs workforce is serious and most crucial impacting PWDs life and their wellbeing. Lack of opportunity for them to be hired in the organization is also a serious problem.

According to the Statistic Department of Malaysia in 2015 unemployment in Malaysia increased from 3.0% to 3.1% with PWDs as the highest number being unemployed. “Pemulihan Dalam Komuniti Network” (PDKNet, 2014) mentioned that only 5.24% of the PWDs population is employed in Malaysia.

Lack of education, skills, government care, devaluation and social ignorance are among reasons PWDs faced challenges in getting employment (Islam, 2015). Having secured employment does not mean that PWDs are without problems. Those hired still experienced a lot of negative behavior by the employer or co-worker. According to Ta, Wah & Leng (2011), PWDs especially teenagers experienced substantially poorer quality of life and are more likely to be unemployed due to institutional discrimination.

Even in the developed countries such as the United States there are cases of discrimination towards PWDs in the labor force. According to Hernandez et al. (2008) they found that the employers tend to be more negative towards PWDs although the employer is supportive of American Disability Act (ADA). Employment for PWDs has fallen since 1990 and the gap between PWDs and non-disabled job prospect has widen in USA. Census data on USA employment in 2011 showed that PWDs employment rate has fallen to 41.1% in 2010 from 50.2% in 1991. Aiden & McCarthy (2014) also said that over 36% of the British people tend to think of PWDs as not as productive as everyone else. The International Labour Organization (ILO) also claimed that unemployment among PWDs is as high as 80% in some countries. In India, from about 70 million of their PWDs, only 10,000 have succeeded in obtaining
employment in the industry while the rest is unemployed (American India Foundation, New Delhi 2014).

With the economic crisis and slow down of economic activities around the world, the issues of employability and career opportunities among PWDs warrant urgent attention and consideration from government and the public. This research is motivated by the employability problems facing the PWDs even with policies to help and empower them. The main objective of the paper is to investigate community’s attitudes towards disability and to examine the effects of these attitudes on PWDs’ participation in the country’s workforce.

This study will contribute towards promoting social inclusion and development in various life domains such as education, employment, and community participation. Another significant contribution of this study is that it will be useful as an input for the government or agencies under the government to improve the policies in employment and social status of PWDs.

2. METHODS
This research was conducted using quantitative approach. Data collection was done through self-administered survey through purposive technique. Respondents were from Kuala Lumpur and Selangor. Self-administered survey questionnaire was used to get the relevant information which will answer the research objective. The questionnaire was developed as an instrument to examine employability opportunity and respondents practice towards PWDs by the respondents. The questionnaire covered the demographic characteristic, knowledge and employability of PWDs. Likert scales was used to gauge the respondents’ perception and knowledge of PWDs issue. 1000 questionnaires have been distributed starting from midyear of 2015 until 2016 to various government and private sector, self-employed, retirees and students. At the end of 2016, the researcher finally managed to collect 820 questionnaires or 82% of the response rate. As a result, after going through the cleaning process only 812 questionnaires have been used and analyzed.

3. RESULTS AND DISCUSSION
Out of the 812 respondents, 34.7% of the respondents are males and 64.2% are females. A large majority of the survey respondents are Malay (80%), Chinese 10.5%, Indian and other Bumiputera with 3.3% and 3.6% respectively. Non-Malaysian citizens also participate in the survey with 1.5% only. Most of the respondents are Muslims which accounts to 82.4%, 7% of the respondents behold Buddhism as their belief. The remaining number of respondents is Christian, Hindus and others with 5.7%, 2.8% and 0.5% respectively. In terms of marital status, 61.2% of the respondents are single whereas 35.8% of the respondents married. The remaining 1.5% of the respondents either is widowed, divorced or separated. As for educational level of respondents, majority of the respondent have graduated from higher learning institution (74.8%). 51.4% are with undergraduate level and 23.5% of the respondents are with postgraduate level.
education. Only 15.8%, 8.6% and 1% respectively are with certificate/diploma, secondary and primary school.

3.1. Community Perception toward PWDs and PWDs’ Employability

Respondents were asked to respond to the following statements: 1. It is society that creates barriers to PWDs and 2. PWDs are treated fairly in the Malaysian society. This study found that most of the respondents agree that there is a gap between disabled people and non-disabled (34.2%). However, 38% of the respondents also moderately agree that disabled people are treated fairly in the society. This result confirms the fact there is still gap and barriers between PWDs non-PWDs. Gaps and barriers formed roadblocks in achieving equality in employment of PWDs in Malaysia.

<table>
<thead>
<tr>
<th>Table 1 Respondents’ PWDs perception based on statements</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statement</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>It is society that creates barriers to disabled people</td>
<td>45 (5.9)</td>
</tr>
<tr>
<td>People with disabilities are treated fairly in Malaysian society</td>
<td>36 (4.7)</td>
</tr>
</tbody>
</table>

When probed further on their views on PWDs, study revealed that majority of the respondents agreed that PWDs are more accident prone than other people (26.2%). In terms of facilities and services, a large majority of the respondents strongly support the development of facilities and services for disabled people (64.0%). Most of the respondents agreed that PWDs are suitable to ride on the public transport (46.8%) and may not cause dangers or adverse effects to other passengers (53.6%). PWDs have the right to participate in the full range of human experiences (success and failures) therefore society and employers should have the same expectations and requirements for all employees.

On the possibility of having employment opportunities for People with Disabilities, a large majority of the respondents answered that disabled people receives fewer opportunities in employment because of their disabilities. On average, the respondents stated that people with visual (59.6%), physical (57.3%), learning (50.9%) and mental (52.3%) impairment has fewer opportunities in employment. However, the group is likely to receive more opportunities in employment albeit having a small number is speech, learning and hearing impairment with 7.6%, 6.2% and 6.0% respectively. Physical impairment is notably the highest group with 29.4% of the respondents assuming to receive much fewer opportunities in employment. With regards to hearing disability it was recorded that 2.5% of the respondent assume people with this disability will render much more opportunities in employment.
4. CONCLUSION

This study has provide empirical evidence that in reality there are still negative perceptions and attitudes resulting from lack of understanding about PWDs and interactions with PWDs. Ironically these negative perception and attitudes became factors that formed barriers for PWDs inclusive participation in the workforce. This is supported by the majority of the respondents’ belief that PWDs are more accident-prone, they cannot use the public transportation effectively and have fewer employments opportunities as compared to non-PWDs. People should be hired for any jobs that they have the skills and talents to perform. No PWDs should be prejudged regarding employment opportunities. They should be given equal chance based on their ability and skills. Discrimination against PWDs must be stopped as it contributes to labor wastage in the workforce. Indirectly the society is paying for the cost of this wastage. This social exclusion can be traced back to the level of awareness and attitude of the general public toward person with disability. This study also found that almost half of the respondent does not know how to respond to PWDs if they require help or assistance. Consequently, this stigma results in the discrimination of PWDs first in institutions of education, in the work force and in the community. Discriminations and ignorance of employers and the leaders of the industry have a negative impact on their quality of life and general well-being of PWDs. PWDs employment prospect seems to be limited due to their impairment, especially in managerial and professional positions if this behaviour continues. Hence more effective efforts and awareness campaigns by relevant ministries and stakeholders are required to reduce this stigma and to empower this vulnerable group.

According to Islam (2015), due to lack of attention and inefficiency of government policies in providing jobs to PWDs job seekers may cause this issue to rise too. This can also be as a result
of the failure of 1% PWDs in public sector program. This is also supported by the statement from Siti Huraizah Ruslan (PWD representative), in the United Malays National Organisation (UMNO) General Meeting in 2014. She said that after 26 years of the implementation of 1% policy, this policy still did not have much impact in creating job opportunity among PWDs job seekers (Utusan, 2014). Therefore, this research recommends that there must be a strengthening of linkages between university, industries and societies. Universities, industries/employers and societies need to work together to ensure the prospects of PWDs employability be improved. As a suggestion, the policy on the circulation 1% of the PWDs required in public sector should be changed to 5%. Government financial support, aid, law enforcement and effective policy are important in ensuring the rights and life of PWDs are supported and protected. Revision and improvement in law is needed to ensure effectiveness of the enforcement. PWDs must be treated with respect and dignity.

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6. REFERENCES


PAWIS KO, GINHAWA NINYO (MY SWEAT, YOUR COMFORT): A QUALITATIVE RESEARCH ON THE LIVED EXPERIENCES OF TROLLEY MEN

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ABSTRACT
Every day, hundreds of commuters rely on trolley men to get to school or their offices, but up until now only a few studies have been made about the lives of these unsung heroes of the rails. The aim of this phenomenological study is to supply a comprehensive portrait of the intrinsic meaning of the lived experiences of trolley men. Using a phenomenological approach, it allowed the researchers to see the participant’s experiences from their own point of view. Homogenous Purposive sampling and Snowball Sampling techniques were utilized in this study; and a semi-structured interview was used on all of the four participants working near the area of the Polytechnic University of the Philippines (PUP), Sta. Mesa. This type of interview gave them the freedom to fully express their thoughts and opinions. After the results were gathered, the researchers employed the Interpretative Phenomenological Analysis (IPA) in analyzing and interpreting the gathered data, three (3) master themes and nine (9) superordinate themes were generated. These master themes are: (1) Reasons for their current life condition, which includes the factors that made them become trolley men and compel to live beside the railway; (2) The troubles in their work, which discusses their daily struggles and difficulties in life and in performing their role; (3) Perceived significance of their job, which identifies their major roles in the community. The said superordinate themes are: (1) Family problems, (2) Poverty, (3) Lack of educational attainment, (4) Dangers, (5) Rivalry, (6) Hardships, (7) Enjoyment, (8) Transportation and (9) Sustainability. This study uncovered the challenging life of Trolley men working along the rails, and the unique kind of living of each one of them. It also tackles their priceless effort to transport their passengers not minding the threat to their lives just to provide for their families.

Keywords: HOMELESS; Poverty; Railways; Train; Trolley men

1. INTRODUCTION
There are a number of ways to get around in the Philippines because of the diversity of our public modes of transportation, but in Manila, more specifically in Sta. Mesa, a very unusual
type of vehicle is becoming popular among commuters. It is called the railroad trolley or the railroad skates. They can be found along the route of the PNR (Philippine National Railways) from Pandacan Station to Sta. Mesa station. The first trolleys were used to deliver gallons of water from one barangay to another back in the late 1960s but they noticed that many of the locals hitch a ride in exchange for a small price so they took this as an opportunity to earn a living.

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Our study uncovered the reasons as to why they became trolley men and we found out that poverty is one of the main factors as to how they ended up with his kind of job. Many Filipinos are experiencing poverty nowadays. There are many contributing factors for this and one of them is their lack of educational attainment which results to unemployment. People who failed to acquire quality education find it difficult to contend with those who graduated when it comes to finding a job. This causes unemployment, a factor which greatly affects the rate of poverty. (Asian Development Bank, 2009). Some of those unemployed people take every opportunity to earn money like trying all sorts of jobs available; however, the income these people receive is not enough for their daily needs. One of the many examples of this is the trolley men.

Some Filipino families experiencing poverty have a hard time looking for a place to live in due to their financial situation. A study conducted in Metro Manila in 1981 showed that there were 1.6 million squatters around the streets of Manila. This number rose to a whopping 2.8 million or approximately 556,526 families by the year of 2010, around the start of the Aquino administration. (Shahani, 2016). Some of these families seek shelter along the sides of the railways and as they live there, they realize that they can utilize the railways as their source of income. This led to the beginnings of the trolley men.

Seeing the faults of everyday modes of transportation, the innovativeness of Filipinos enabled them to come up with unconventional ways to get around. (Cervero, 2000) As the old saying goes, necessity is the mother of all inventions. People along the railways saw the lack of capacity of the trains to accommodate all of the commuters so they saw it as an opportunity to earn a living. However, the work of the trolley men is not easy. They battle against the weather on a daily basis. Not only do they work despite the intense heat of the sun, but they also toil even when it’s raining cats and dogs. They go through all of these just to be able to support their families. When the stream encounters rock, the stream always succeeds not because of strength but because of its persistence (Buddha, n.d). Even though trolley men face various obstacles in their line of work, they still manage to make it and live their everyday lives because of their persistence.

The role of trolley men is very important to those living near the railway that need to get a lift without having to go through the heavy traffic which is commonly encountered by individuals who take mainstream modes of transportation. A global database website called Numbeo ranked Manila as the 10th city in the whole world with the worst case of street congestion. (The Philippine Star, 2016) Furthermore, the service they provide is cheaper than that of other public utility vehicles which means that many commuters rely on them for a fast and affordable way of
getting around. Moreover, the location of the trolley makes it ideal for the use of students, specifically Polytechnic University of the Philippines (PUP) students. For them, trolley men have become part of their daily commute to school while for others, they consider riding the trolley as a fun experience.

The purpose of this study is to explore the world of trolley men. Furthermore, this study aims to inform people about the unsung heroes of the railways and at the same time broaden their perspective about them and make them see the trolley men in a new light. The intent of this study is also to make the trolley men known and show their significance to the community which in turn would spark the interest of the local government in them and give the trolley men the recognition they deserve.

2. METHODS

The purpose of research design is to ensure that all of the research problems will be patently answered. Furthermore, the research design acts as a guide on how the researchers came up with a phenomenological method.

Qualitative research was employed in this study. According to Wyse (2011), the function of qualitative research is to unearth trends in ideas and outlooks. This type of research requires the researcher to immerse himself in the study to dig deeper into the problem.

Phenomenological approach was utilized in this study. According to Stanford Encyclopedia of Philosophy (2013). Phenomenology is described as the study of experiences through a person’s first-hand experience. Moreover, the center of the phenomenological approach is to interpret people's experiences or hardships in a specific situation.

2.1. Selection of the study

This study had a total of four (4) respondents who have all gone through more than a year of working as a trolley man.

2.2. Sampling Procedures

This study applied homogeneous sampling technique which is a process of selecting people who possess similar characteristics, backgrounds and experiences. Furthermore, this form of sampling is often used when conducting a research, in addition, this technique is easy to understand and delineate a particular group. Moreover, another technique used by the researchers was the snowball sampling or referral sampling technique. When the researchers faced difficulty in finding participants they asked their acquaintances who are qualified for the given criteria by the researchers.

2.3. Research Locale

This pertains to the location where the respondent can express their emotions freely and without hesitation and for that reason; the researchers could easily add information comfortably. The interviews took place near the railways of the PNR (Philippine National Railways) in Sta. mesa, Manila.

2.4. Research Instruments
The instruments indicated below were used by the researchers in collecting data.

A. Aide Memoire

It is composed of a list of questions which serves as a guide to the flow of the interview. It also helps in creating follow up questions which will make it easier for the trolley men to further elaborate their lived experiences.

B. Informed Consent

It is a form where in the rights of the participants are stated. It also declares that any statement made by the participants will remain confidential.

C. Pre-Qualifying Form

It is a set of questions related to the study which indicates whether the person intended to be interviewed is qualified for the study.

D. Voice Recorder

It is a vital tool used for recording the statements made by the participants.

2.5. Data Gathering Procedure

The data gathering procedure shows the process of how the researchers gathered the data used in the research. The first action done is to understand and have knowledge about the lifestyle of the participants in order for the researchers to build a good interrelationship between the participants. Furthermore, the researchers handed over an informed consent in order to accredit the participants if they are willing to participate in this phenomenological study. The researchers conducted an Aide memoir, a questionnaire that the researchers made which served as a guide for the researchers and respondents in the personal interview. Moreover, three (3) of the researchers recorded the actual interview and one (1) of the researchers took down the response of the participants. For the participants to fully express themselves, the interviews were held in locations where they feel comfortable and where their confidentiality is kept. The researchers used the language that the participants were most familiar with in order for them to clearly comprehend each question. Moreover, each question had the purpose to obtain the data essential to the study.

2.6. Data Analysis

The response of the participant gathered through an interview was reviewed and analysed by the researchers in an Interpretative Phenomenological Analysis (IPA) in order to find or come up with a conclusion. The Interpretative Phenomenological Analysis is a methodology used for qualitative research; moreover, this methodology examines the particular lived experience of the participant of the study and developed a conclusion on their experiences (Smith, 2011).

Data analysis
A. Looking for the themes in the first case

During this particular part the records are being studied. The left hand margin will be the basis for note taking on what is immersing or the important details on the responses of the participants. Themes that will turn out in using this stage will act as a guide for other cases.

B. Connecting the themes

During this particular part each topic that are created are listed on a paper. The researchers look for any connections between the topics. The said rundown is arranged in a chronological order that is based on the succession which they came up in the transcript. More diagnostic or theoretical requesting is involved in the following stage, as the researchers try to comprehend the connections between the themes which are materializing. A portion of the subjects may meet while some may surface as superordinate ideas.

C. Continuing the analysis with other cases

During this particular part a single participant's transcript may be made up of a contextual analysis in its own benefit, or more frequently, the study can proceed to administer interviews with certain individuals. Whichever approach is to be administered; one must be well focused in identifying repetitive patterns but also recognize other issues surfacing as one is finishing the transcripts resulting into the segmentation of information where in the same ideas were joined while varying ideas were separated.

D. Write-up

This part is more focused on making the topics more interpreted. It is where the analysis becomes broad again, as the subjects are being cleared and understood. The lists of themes are the basis for the record of the participant's reaction, which shows as a narration, together with the exact words said by them. Understanding and consideration is taken to further notice the clear difference between what the participants said and the analyst's translation.

3. RESULTS AND DISCUSSION

3.1. Findings

Using the Interpretative Phenomenological Analysis (IPA), researchers came up with three master themes which also includes nine (9) superordinate themes from four supervised interviews for the lived experiences of trolley men. The following master themes are as listed below:

- "...bata pa akonautula..." "...I was orphaned at an early age" - Reasons for their current life condition.
- "Nahagip ng trenang trolley ko..." "The train hit my trolley" - The troubles in their work.
- "...nakabili ako ng mgaailangan ng pamilyako..." "I can buy the needs of my family" - Perceived significance of their job.
These master themes were generated from nine (9) superordinate themes. The said themes are:

- **Family Problems**: The participants distinguished that they experienced problems within their families that lead them to become Trolley Men.
- **Poverty**: The participants distinguished their life issues that contribute to the factors that lead them to become Trolley Men.
- **Lack of Educational Attainment**: The participants distinguished the difficulty of finding a stable job due to lack of education.
- **Dangers**: The participants distinguished the risks and hazards they experienced in their job.
- **Rivalry**: The participants distinguished the strife they experienced in their job.
- **Hardships**: The participants distinguished the struggles or difficulties that come along with their line of work.
- **Enjoyment**: The participants distinguished the happiness they experienced while working.
- **Transportation**: The participants distinguished the issues about how they transport the passengers.
- **Sustainability**: The participants distinguished that as a result of their hard work and perseverance they are able to provide the needs of their family.

The foundation of this chapter was formed by the probing of these master themes and their factor superordinate themes. These themes are known as possible interpretations of the lived experiences of trolley men. The themes selected in this study were picked for their relevance to the research questions and do not deal with the entire experience of the output of the participant and they may vary from researcher to the participants.

For the sake of better understanding, some irrelevant words or remarks such as “ah”, “eh”, “ano”, “parang” and “kasiano” were removed and were replaced as the excerpts were presented and were replaced with dotted lines enclosed by brackets (...). To indicate that the participant was speaking previous or subsequent the excerpt, dotted lines were added. Pen names were used for all of the participants to preserve their confidentiality.

**3.2. Simulacrum**
This image represents the life of a trolley man. The rickety structure of a house on the side of the tracks appear as the first master theme: Reasons for their current life condition, their poor state of living and their financial problems. The incoming train depicts the second master theme: The troubles in their work, the danger he faces every time he steps on the rails. Lastly, the man pushing the trolley portrays third master theme: Perceived significance of their job, the willingness and bravery of each trolley man to keep moving forward despite all of these obstacles in life for the sake of their families.

4. CONCLUSION

This phenomenological study of the lived experiences of Trolley Men generated three (3) master themes. The three (3) master themes are the following:

1. “…bata pa akonautila…” “I was orphaned when I was young” - Reasons for their current Life Condition

This master theme had generated three (3) superordinate themes. These are (1) Family Problems, which was referred to one of the participants who was orphaned at early age and later became a trolley man. Furthermore, this was also referred to the second participant who was separated from his family. (2) Poverty, which was referred to the participant who experienced struggles of living because of financial problems and shelter problems. (3) Lack of Educational attainment,
this was referred to all the participants who found themselves struggling to find another job because they did not finish their education due to financial problems, hence, they lacked knowledge needed for decent paying jobs.

2. “Nahagip ng trenang trolley ko…” “The train hit my trolley”- The troubles in their work

This master theme had generated three (3) superordinate themes, and these are the following: (1) Dangers, which was referred to the participants who are facing the life threatening situations every day in their work on the rail road. (2) Work Conflicts, referred to the participants who avoid delinquents and competitions for passengers to avoid troubles in their work place, for their safety. (3) Hardships, referred to the participants who are persistently striving for their job in their everyday life.

3. “…nakakabiya ng mgaailangan ng pamilyako…” “…I can buy the needs of my family…” - Perceived significance of their job

This master theme had generated three (3) superordinate themes. These are the following: (1) Enjoyment, which was referred to the participants who find themselves in a situation that no matter how difficult and stressful their job is, they still find reasons to enjoy and appreciate their job. (2) Transportation, this was referred to the participants’ main purpose of their job which is very important especially to the likes of employees and students. (3) Sustainability, which was referred to the participants’ responsibility to provide the needs of their family.

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TRANSFIGURING THE UNBEARABLE THROUGH POPULAR MUSIC
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ABSTRACT
As intrinsic as the linkage of pain and suffering since childbirth, so is the extensions of art are embedded in human life. For that reason, it is my interest to discuss in this paper one of the most celebrated art form of this time – music, particularly ‘popular music’ and its role in this disputably absurd and unbearable existence.

What I bid to establish is to reiterate the notion of the unbearable reality of human existence in light of some existential philosophers’ perspective, such as Albert Camus, Friedrich Nietzsche, and Jean-Paul Sartre, and thereby claim that popular music is one great model of what Nietzsche calls as the Dionysian art that may lead us towards the affirmation of such an unbearable existence. For Nietzsche, it is the Dionysian consciousness, the tragic worldview which is the rarest state of being, that will lead us into saying ‘Yes’ to life. I argue then that such Dionysian character is epitomized in a work of art that is not far from the most of us—music, and again in this case, popular music. In so doing, I will first give light to the following fundamental inquiries: (1) Why is human existence unbearable?; (2) What is the role of music in such life?; and finally conclude that popular music, upon the disclosure of its Dionysian essence, is the most fitting if not the best form of art that transfigures the unbearable boldness of existence to bearable.

The paper might be helpful in expanding the studies about aesthetics and humanities and unveil their importance and role not just in the academe but most importantly, towards the lives of the most of us.

Keywords: aesthetics; Dionysian art; existentialism; popular music; unbearable

15. 1. Introduction
At any street corner, art inevitably circulates along with the air that every being there is, is able to breathe. Like the latter, it is there presently revolving and evolving in many forms that humanity could come to acknowledge within and beyond this world.

Highlighted in this paper is first, life is something that is absurd and unbearable. What then should we do about it? Such reality entails no cure, so what I offer here is at least, ‘a way to live
with it’ and that later on will lead to my argument that it is none other than music, and popular music in particular. I discuss the former in the section following this part, and the latter, divided in two subsections, is to be discussed after the said section. To end, I provide a conclusion that wraps up the [aesthetic] claims presented.

a.  

b. 2. Human existence as ‘unbearable’

Socrates famously noted that “The unexamined life is not worth living”. From this point on, fewer had been the number of thinkers who wrote and pondered about the meaning of life, or to follow Socrates’ words, the examined life, from which also precedes meaningfulness (Note 2010: 138). To bring the matter in a logical speculation or deduce it in the philosophy of language perhaps makes it only all the more obscure and pointless. Hence, Socrates’ invitation to a life examined shall lead us to an insight of life’s unbearable character which is parallel to how a lot of existentialists gave light to the matter.

Albert Camus was one of those few who sheltered importance on the ‘examined life’ by discussing an existential meaninglessness rather than tiring one’s self in the endless race of search for meaning. This is evident in his works both in literature and philosophy. And from there, the atheistic thinker deliberates his argument on the absurd$^1$. It is not simply about deciphering the meaninglessness of life, but it is more about diving beyond this absence of meaning which in return, would lead our feet to arrive at a position where we might be able to discover the absurdity which entails ‘unbearability’, that is there in this existence. Probing Camus’ life first, the unbearability of existence already confronted him since childhood, which could be why he interpreted life as absurd (See Camus 1955).

Camus have not had the chance to meet his father whom he shortly lost less than a year after he was born for the inescapable demise brought by the requirement to get involved in the battles of the World War I (Lottman 1997:21). Since the death of his father, Camus’ mother have had no choice but to bring them to the house of his grandmother, who was said to be a harsh woman from whom his mother was “a passive witness to the brawling and beating, restrained by fatigue, by fear of the old woman, and the inability to express herself sharply and effectively” (ibid.) By looking at Camus’ early ill-situated life—growing up without a father, an illiterate mother and a harsh grandmother within a supposed to be harmonious household for a growing up child—although he had not yet written about it, the unbearable vagueness of existence had already been apparent in his experience, where arguably, the palms of our hands were unable to fix.$^1$ Another instance from his childhood is that, at the age of seventeen just like an ordinary teen who was supposed to be cherishing the days of his youth, he had experienced the early symptoms of tuberculosis (ibid.: 43). Thereafter, he had to give up soccer (a sport that he was more than fond of during his teenage years) and reluctantly resorted to medication. It is this situation that displays a vivid example of every teen’s struggle to cope to and comprehend life. Camus here, encountered and experienced the unbearable brashness of life firsthand, and is bound to the fact that there is an innumerable life circumstances that flout explanations.
Further, when Camus moved to another city in France where he took a job as a reporter and as a journalist, years later he met Jean-Paul Sartre (Sleasman 2011:6). The two were believed to have been good friends for almost ten years and shared ideologies of the same directions and interest. However, as this tie bloomed to its peak, it has to come to its end.¹

Examining the life lived by the proponent of the concept of the absurd, Camus himself was inevitably haunted by such since childhood. Again, for him, to experience the absurd is to be faced by the fact that our existence is null of any meaning or value, and which becomes more evident when we begin to sign up for a quest on finding out life’s purpose. Later on, as he sketches the ideal lifestyle that might be lived vis-à-vis the absurd—that of Sisyphus’—it is as if he is mirroring not only his own but also the lives of most, if not all of us who carry our own rocks towards the peak of our forlorn mountains on a daily basis. Camus had himself lived the absurdity of human existence which I intend to better call as the ‘unbearable’ existence. Yet, if Camus was still living, he would not definitely suggest a proper solution to this. Just like his aforementioned ‘absurd hero’ (see Camus 1955), we ought to learn to live with the illnesses of life rather than tire ourselves in searching for a cure. On the contrary, this is the part where art should take its toll on such reality of existence, which I wish to expound on the succeeding sections of this paper.

To further explicate the unbearable actuality of existence, let us consider the late friend of Camus—Jean-Paul Sartre. Sartre’s views coincided with that of his mentioned former friend in the way that he too interpreted human existence. In Sartre’s novel Nausea, the protagonist’s (Antoine Roquentin) somewhat indifferent character exemplifies his quest for the depth of things—for nearly everything that exists in the world. This is evident from the simplest events to the complex occasions that he struggles with on a day-to-day basis. The character appears to be disinterested on the particular meaning of things, of existence per se, which reveals Sartre’s viewpoint of the unbearable character of life. To state one example, Roquentin had this thought upon the tram seat as he rode the vehicle:

“This huge belly turned upwards, bleeding, puffed up-bloated with all its dead paws, this belly floating in this box, in this grey sky, is not a seat. It could just as well be a dead donkey, for example, swollen by the water and drifting along . . . . Things have broken free from their names. They are there, grotesque, stubborn, gigantic, and it seems ridiculous to call them seats or say anything at all about them.” (Sartre 2013)

Roquentin was able to transcribe these thoughts beyond what a typical individual could in such a simple daily encounter, which convinced him rather that the depth of things only discloses their long lost absurdities and unbearable attitudes that are always there, waiting for its chance to penetrate one’s consciousness. Above, however is just an example of the many passages of Sartre’s novel that demonstrates his outlook on human existence. There were also instances where his protagonist becomes confused and drowsy upon picking up a piece of paper, staring at a glass of beer, up to his private unexplainable and non-pleasurable feelings towards sex (ibid.). In sum, Roquentin’s apprehension of the sheer weirdness of the world brings him the feeling of
nausea, which I say is no different from what I point heresince the beginning as ‘unbearable’. Hence, existence which is in this sense nauseous has its unbearable potency over all human life forms that are there in this world.

What now would be the point of understanding the truth of an absurd, nauseous, and unbearable existence if not any of the mentioned philosophers would suggest anything? Consulting another existentialist such as Nietzsche, he may offer something significant to us when he said that: “Art and nothing but art, we have art in order not to die of truth”. Such interesting line should be the point of departure to redirect our interests on art, because it has an affirmative role on human life. But what is the most fitting among its varied kinds? I argue that we should consider popular music.

i. 3. Music and the unbearable
At this point it might have been a wonder why music—of all forms or art that we can conceive—is what I enthroned as the saving light of this discussion. So much so it is better to understand this category of art with depth and clarity so that later on one may participate in the thought that music is that which we can value as the art that is able to transfigure the unbearable to bearable.

3.1. Music towards the affirmation of life
To help us utter better appreciation to music, consider Schumann:

“A genuinely artistic work of music always has a certain center of gravity toward which everything must tend, and from which the spiritual radius emerges… If one has first listened to music with tension and torture, then the moment must come when one can, for the first time, breathe freely.” (Dorian 1969:67)

Parallel to this is the significance of music as emphasized also by the existentialist Gabriel Marcel in one of his works, Music and Philosophy, where he regard music as his saving light which did not only commanded the development of his thought but also his own life itself. Herein Marcel (2005:53) writes:

“…it is music and music alone that has caused me to discover the saving light. It is music that has opened the road to Truth for me, towards which I have not ceased striving, this Truth beyond all partial truths that science demonstrates and expounds, the Truth that illumines the greatest composers like Bach and Mozart.”

Music and all its varying kinds that have been prevalent in our daily lives played its fundamental role even in the lives of those we least expect it, i.e., in the lives of one of the most celebrated philosophers after Husserl – Marcel. Marcel figured the role of music in his life that he even considered it as his saving light. From the quoted statement, the philosopher is telling us that it is as if music open doors to truth and light, the kind which makes us feel fulfilled in this unbearable existence. In line with this, Friedrich Nietzsche’s (2000) earlier philosophy of art as evident in his first book, The Birth of Tragedy, is centralized not on the role of art per se, but more
importantly, the role of art in the affirmation of life. Rejecting a lot of the aesthetics views of the ancient Greeks especially Plato, Nietzsche expounds the elevation of the “tragic worldview” or “tragic awareness” in the promotion of the supremacy of the Dionysian art. He critiqued the Greeks’ clung to Apollonian art, inspired from Apollo the god of harmony, order, and sunlight, and suggested otherwise the need for the spirit of its opposition—Dionysus, the god of wine, revel, and disorder. In his book he emphasized that art should derive its progression out of the duality of Apollo and Dionysus—a harmonious combination of order and disorder, the most fitting representation of the life itself (ibid.: 18). However, it is the Dionysian art (though given birth through the Apollonian) that which may lead us on saying ‘Yes’ to life. Nietzsche also says that this is what the Greeks have missed, and for the most part its complete manifestation through music.

But then we should not neglect the confusion that we may place on Nietzsche’s ideas. He is not suggesting that we should create beautiful illusions, or lies for it might be a trap to what Sartre calls as bad faith (Sartre 1958:47-67), because arguably, life itself is already an illusion. Herein, art rather allows us to experience life as a ‘game of play’, or putting in the words of Camus, we are not in search for a cure to the cancerous absurdity and unbearable of life, but only a way to at least live with it (see part two of this paper).

Also, going back to Sartre’s (2013) novel is that moment where the feeling of nausea is eliminated whenever Roquentin was alone with himself in one of his favourite café and a jazz music plays. In many instances of disclosure of the nauseous oddity of existence, the protagonist only finds peace of mind and tranquillity of his thoughts—not in his field of endeavour, nor his sexual life, nor any other ways that we can conceive to cope with such an absurd existence—only through music. This then is an obvious manifestation of the potent role of such art in the absurd, nauseous, and unbearable human life. Indeed, music makes the unbearable bearable.

3.2. On Popular Music

The role of music per se was already pointed out and the final item left to discuss is the emphasis on a particular type of music – popular music.

Popular arts in general have been an issue to some scholars for its vulnerability in the traditional theoretical and analytical framework that is present in the field of aesthetics (see Hawkins 1994:233-235). Some sought the development of any aesthetic theory on popular arts not as something intellectual but rather as ‘admirably ambitious’ (ibid.). However, the point here is not to beef up any of the opposing party’s claims. More specifically, our interest is why popular arts being a debatable one, be that particular kind that can transfigure the unbearable weight of existence to a more liveable one.

Adorno (ibid.) for instance, distinguished one that is ‘popular’ from the forms that he considers as ‘serious’:

Th e general types of hits [of popular music] are also standardized: not only the dance types, the rigidity of whose pattern is understood, but also the "characters"
such as mother songs, home songs, nonsense or "novelty" songs, pseudo-nursery rhymes, laments for a lost girl. Most important of all, the harmonic cornerstones of each hit—the beginning and the end of each part—must beat out the standard scheme. This scheme emphasizes the most primitive harmonic facts no matter what has harmonically intervened. Complications have no consequences. This inexorable device guarantees that regardless of what aberrations occur, the hit will lead back to the same familiar experience, and nothing fundamentally novel will be introduced.

On the latter part, what Adorno is trying to get at is that nothing serious and novel was procured by popular music. That may also be the reason why he has such distinction in the first place. The kinds of what we promote—the loud banging of the drums, the gothic gestures and sounds of the composition, the crowd that yells the nonsense lyric in a concert—the kind that many will indeed raise an eyebrow, including people as great as Adorno. However, unlike them [or him] note that we should not have anything in opposition to the ‘seriousness of serious music’, as he sees it. The quiet and serene concerto of Bach and Mozart is respected as they need be. But the fame of popular music shall better drive us towards what Nietzsche (2000) calls as the Dionysiac—trivial, vulgar, chaotic, disorderly. One that brings us to a total forgetting of ourselves, while still indulged in the unbearable reality of existence (ibid.). It is here where we figure our divine madness. Just like Dionysus, we both become a paradox and a duality, a tragic contrast, or simply putting it, we realize the enchantment and ruin that life brought about while still willing to embrace such enigma (see Otto 1965).

Whether we like it punk or rock, acoustic or jazz, or any style that fancies us, it is what makes the repetitiveness of our Sisyphean lifestyle less intolerable.

4. Conclusion

There is no exception with experiencing the unbearable reality of existence. It is the soul of our ego that seems to be a twin of its very breathing. It is both a scorn and passion for life; it is both lost and victory. Even most of those who partake on such perspective, confronted it in their own personal existence in a number of indifferent experiences, i.e. Camus, Nietzsche, et. al. Perhaps, it was always impossible to exist without having a personal encounter with the absurd within one’s experience. But then again as Camus puts it, if the absurdity or the ‘unbearability’ of life is an ailment, our goal is not to search for a cure to such ailment but to learn to live with that disorder that humanity is inevitably fated to be in. Luckily, we have music. It is in this form of art where all human life can relate, whatever are our race, nationality and language is. So much so, let us lose ourselves in our favorite rhythm and melody, and figure phenomenologically, how such aesthetic transfigures the unbearable to a more coping one.

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6. References


FROM CATERPILLAR TO BUTTERFLY: THE EXPERIENCES OF MEN IN THE JOURNEY TO TRANSWOMANHOOD

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ABSTRACT

80% of the Filipinos are followers of the Roman Catholic Church, as per the last census of National Statistics Office (NSO) in 2010, which makes the Philippines as one of the countries that uses the Bible as its foundation. This could be the number one reason on why the Lesbian, Gay, Bisexual and Transgender (LGBT) community is not widely accepted up to now, especially the Transgender. The purpose of this study is to give a glimpse on what men experience in the journey to Transwomanhood, from their struggles to their new life as a woman. It further aims to give enlightenment for the people, who may not be aware and close-minded of this concept. The researchers specifically chose Transwomen because they are the most common type of Transgender in the LGBT community.

In order to find a specific category of co-researchers, the researchers used the following sampling techniques: purposive, snowball, and quota. They were, then given a validated aide memoir before the scheduled interview. Their participation lasted 10-50 minutes each, from which the five (5) master themes and 17 superordinate themes were produced through a process of Interpretative Phenomenological Analysis (IPA). The master themes are the following: (1) Identity Delineation, or how transwomen identify themselves, (2) Factors that affect their decision, (3) Challenges on the process, (4) Outcome of the transition and (5) Perception of their new self. The superordinate themes that corresponds with the master themes are the following: (1) Discomfort, (2) Disparity, (3) Pride, (4) Enlightenment, (5) Hopes and Dreams, (6) Lack of Parental Support, (7) Discrimination, (8) Misconception, (9) Health Risks, (10) Fears, (11) Finance, (12) Fulfilled Dreams, (13) Success, (14) Joy, (15) Confidence, (16) Liberation, and (17) Wholeness. This study aims to expand the concept of Transgenderism, to bring unity in our diverse society.

Keywords: LGBT Community; Transgender; Transgenderism; Transwomanhood; Transwomen

1. INTRODUCTION
There are 230 million Lesbian, Gay, Bisexual and Transgender (LGBT) Community members in the world, which is 3.3% of the total population. 18 million or 7.8% of this are Transgender. What makes them special is that they are the only ones who changed in terms of Gender Identity (Williams, 2014).

Originally, when we think of the person’s sex, it is the body’s given biological make-up that includes male and female reproductive organs as well as chromosomes. That definition fits Gender or Sex, but not its identity or orientation. Gender Identity is how one feels inside while Sexual Orientation is who one is attracted to depending on his gender. People who did not feel a “match” of their Gender or Sex to their Gender Identity call themselves “Transgender” (The National Center for Transgender Equality, 2016).

Based on the studies of The National Center for Transgender Equality (2016), there are three types of Transgender: Transwoman (male to female), Transman (female to male) and Genderqueer (neutral). However, transwomen are three times or 75% more common than the other two combined because: 1) they are widely known, 2) surgeons come up with more realistic results on them, 3) sex reassignment on them are cheaper due to variation of methods for surgery (Kaplan, 2014).

Big numbers mean big problems. According to the National Transgender Discrimination Survey Report (2012), 50% of Transgender are harassed in their workplace, 26% lost their jobs, 19% suffered from family violence and 41% have attempted suicide; most of them are Transwomen.

Workplace and family are just two groups in this society that are “affected” by this change in Gender Identity. But, the main opponent here is the faith or belief--- what is written in the Scriptures.

The Philippines, is a Catholic country. 80% of the Filipinos are followers of Roman Catholic Church, as of the last census of National Statistics Office (NSO) in 2010. So, what do we Filipinos say about transgender particularly the transwomen? “A woman shall not wear man’s garment, nor shall a man put on a woman’s cloak, for whoever does these things is an abomination to the Lord, your God.” Deuteronomy 22:5. A verse from the old testament of the bible. If clothing is a big deal, how much more for the genitals?

Recently, a transwoman won a seat in the Philippines Congress, Geraldine Roman is the first transgender politician in a conservative and religious country which proves that the Philippines is, somewhat, progressive. This is historical (Patel, 2016). The capacity of an individual to serve his or her country cannot be seen on gender. It is what one has in his head, heart--- his will to serve others (Roman, 2016).

The body is no more but a shell, if you can be a happier, loving and caring person by modifying yourself, then, go right ahead. God looks more on what is in your heart, not what is in between your legs, recollected by Roman (2016) as said to her by the Jesuits of Manila, blessing her transition. “There is neither Jew nor Greek, there is neither slave nor free, there is no male and female for you are all one on Christ Jesus,” Galatians 3:28. A verse from the New Testament where gender is not an issue. The Transgender Community give off the embodiment of “one
blood” just like the concept that all races are of “one blood”, the genders and sexes are part of that one whole community, thus the saying that there is no male or female for all are sacred, made in God’s divine image (Mollenkott, 2008).

This research exists for the awareness of people on what do some men feel or experience in the journey to Transwomanhood, from the awakening to living in an actual woman’s body. This study does not only benefit the LGBT community, but the whole society.

2. METHODS

This exists for the researchers to prove that the problems were given justice by using systematic measures. It gives outline on how the researchers came up with a phenomenological approach.

As proposed by the University of Sydney (2016), Constructivism, the ontology used by the researchers, in psychology is a learning theory, which explains how one can gain knowledge or learn from an experience.

The researchers used Interpretivism as their epistemology (the way of knowing the truth). According to Myers (2008), interpretivism in the researchers’ perspective, should come up with an interpretation from the elements gained from the study; thus, giving meaning to the information experienced form the co-researcher.

As for the methodology, qualitative approach took place. It is primarily exploratory research where researchers should dive deeper understanding from uncovered trends, opinions and thoughts about the study (Wyse, 2011).

Stanford Encyclopedia of Philosophy (2013) published the definition of “Phenomenology”, the method used by the researchers, as an experience about a certain object. It is where the researchers will be able to give an analysis or interpretation.

2.1. Selection of the Study

The co-researchers of the study are transwomen: before, during and after the process of transwomanhood. This study has six (6) co-researchers: Two (2) before the process, two (2) under the Hormone Replacement Therapy (HRT) and two (2) completed the processes including Sex Reassignment Surgery (SRS).

2.2. Sampling Procedures

This study implies a purposive sampling technique which is also known as selective sampling technique wherein researchers choose members of a specific population to participate in a certain study (Black, 2010).

Another sampling technique or method used by the researchers is the snowball sampling technique. This method refers on selecting participants in a very limited or small specific group of population. This is also a chain referral or when the researchers finished monitoring the first respondent, they will ask for the connection of the respondent for referral of another respondent who will also have a big part in the study (Explorable.com, 2009).

In addition, the researchers work on quota sampling in which they identify categories important to the study. Subgroups are created based on each category and the researcher decides how many co-researchers to include from each subgroup and collects data from that number for each subgroup (Blackstone, 2017).
2.3. **Research Locale**
This refers to the place/s where data were gathered. The place where the interview is conducted depends on the co-researchers. The co-researchers can answer the questions asked for them with ease where they prefer to answer comfortably: Ateneo de Manila University, Tondo, Ortigas and Pasig --- all in the cities of the National Capital Region, Philippines.

2.4. **Research Instruments**
Research instruments are the devices that were used to collect. To gather data, the researchers used the following:

A. Informed Consent
   - This was used to assure the rights of co-researchers as well as their privacy. It guarantees that the co-researchers will understand the nature of the research. Through the informed consent, they can freely decide whether to participate in the study or not.

B. Voice Recorders
   - To keep track of the information, data and/or words that the co-researchers will provide.

C. Aide Memoir
   - It contains questions that serve as the guide of the researchers while doing the interview with the co-researchers.

D. Research Journal
   - This contains different interpretations, comments and analysis of each of the researchers about the information gathered from their co-researchers. This is an individual journal and by this, the researchers can be able to develop their own professional growth.

E. Pre-Qualifying Form
   - This is a questionnaire made by the researchers for them to know if the participants are qualified under the study’s scope and limitations.

2.5. **Data Gathering Procedure**
According to the Masters Papers (2009), a research paper guide website, the researchers should know the culture of the co-researchers. They will then collect and combine the data gathered which will be the origin of an unbiased judgement.

The co-researchers were given Informed Consent for the approval of participation in the study along with the Pre-qualifying Form. It was also permitted by the adviser. The researchers made an Aide Memoir, a self-constructed questionnaire, which served as the guide during the interview. This is translated in an understandable language for the avoidance of misconception.

All researchers (6) asked questions, listened, took notes in their individual research journal and three (3) of them recorded (by a recorder) simultaneously.

The personal interviews were held in places where co-researchers feel satisfied of their conditions and privacy. This lasted from ten (10) to fifty (50) minutes each.

With this setting, the researchers gathered data and information sufficient for the study.
2.6. Data Analysis

The data and information gathered from the interview with the co-researchers were analyzed by using Interpretative Phenomenological Analysis (IPA). The main purpose of the IPA is to explore ones’ particular life experience and/or events. Its goal is to dig deeper or go beyond the co-researchers’ understanding about their personal and social life. This will lead to avoidance of misunderstanding (Smith and Osborn, 2007).

Data Analysis

By the provided stages of Smith and Osborn (2007):

A. Looking for the themes in the first case

The first stage involves a lot of re-reading of the transcript. If the researcher completely understood what is transcribed, he can write his interpretation on the left margin. From the analysis, he can create a theme that will serve as guide for other transcriptions.

B. Connecting Themes

The themes were to be listed in a separate sheet in a chronological order depending on the flow of what is transcribed. Some will be the main themes while themes with relevance with the main theme may act as superordinate concepts or otherwise, removed.

C. Continuing the analysis with other cases

The researchers should continue the analysis separately from one co-researcher to another. In this stage, diversity will take place for the transcript is and can be different depending on the individual co-researcher. However, the researchers may use the first themes made from the first co-researcher that may have a connection or relevance to the second co-researcher’s transcription.

D. Write-up

This stage states that the main themes created from the transcriptions will be broadened by the researchers through a narrative approach. Lastly, the researchers will illustrate the flow of the themes.

3. RESULTS AND DISCUSSION

3.1. Findings

By using Interpretative Phenomenological Analysis (IPA), the researchers had a glimpse of how it felt going through the process of transwomanhood. IPA method is applied to indicate analyzed exploration of personal lived experiences (Smith and Osborn, 2007). Investigation of both master themes and its superordinate themes constructed the foundation of this chapter from the interviews.

The researchers came up with 17 superordinate themes, which best explains the experiences of men in the journey to transwomanhood:

- Discomfort: The co-researchers stated that it brings discomfort keeping their identified gender as a secret and hiding their biological sex organ.
Disparity: The co-researchers stated that they had realized that their gender identity is different from their biological sex.

Pride: The co-researchers stated that they are not ashamed of being a transwoman.

Enlightenment: The co-researchers stated that knowing the concept of a transwoman helped them know who they really are.

Hopes and Dreams: The co-researchers stated that they would become happier when they have reached their dream of becoming a real woman.

Lack of Parental Support: The co-researchers stated that their parents do not support them because of their lack of knowledge about the concept of being a transwoman.

Discrimination: The co-researchers stated that there are still a lot of hate crimes against transwoman as well as have negative impressions of them.

Misconception: The co-researchers stated that the society thinks that one is a transwoman when he had already underwent surgery. It is not actually the case.

Health Risks: The co-researchers stated that taking Hormone Replacement Therapy (HRT) have side effects in their health.

Fears: The co-researchers stated that the reason as to why their Sex Reassignment Surgery (SRS) is postponed because of their fears: religion and discrimination.

Finance: The co-researchers stated that they do not have financial stability to support their transition.

Fulfilled Dreams: The co-researchers stated that taking HRT/SRS makes them feel like a real woman.

Success: The co-researchers stated that they become more successful in making their decision.

Joy: The co-researchers stated that whenever they look at the mirror, they feel happier seeing themselves because they are more comfortable with their new figure.

Confidence: The co-researchers stated that they gain higher self-esteem.

Liberation: The co-researchers stated that being who they really are, a transwoman, is very liberating.

Wholeness: The co-researchers stated that they feel like a whole person now.

From these, five master themes were created to answer the statement of the problem. These were as follows:

- “I’m not a man; I’m actually a woman” - Identity Delineation
- “Dahil gusto kong maging babae.” “Because I want to be a woman” - Factors that Affect their Decision
- “It wasn’t easy…” - Challenges on the Process
- “I don’t see a man in me anymore.” - Outcome of the Transition
- “I am complete now.” - Perception of New Self
The generated themes are reliable and legitimate details from the co-researchers who had experienced exactly onto what the study needs. Most of them are personal reasoning resulting to indirect response to the guide questions or “aide memoir”. Thus, some irrelevance was eliminated to produce specific answers. They chose their own alias names, which they have been using as their feminine names to keep them secured and confidential.

### 3.2. Simulacrum

For the central question: What are the experiences of men who undergo/underwent the journey to transwomanhood?

![Figure 3.2.1. The experiences of men in the journey to transwomanhood as represented by the metamorphosis of a caterpillar to butterfly.](image)

The illustration (figure 3.2.1) shows the metamorphosis of a caterpillar to butterfly to highlight the experiences of men in the journey to transwomanhood. The first stage of metamorphosis is the embryo stage where one is considering its individualism as a connection to a person’s (1) identity delineation discovering his/her true self. With the connection to the study, transwomen finally identified themselves as who they really are. The second part is the caterpillar stage where its physical appearance has definite form but is not yet complete. This represents (2) the factors that affect Transwomen’s decision to pursue transitioning. The third stage is the pupa stage where the caterpillar undergoes transitioning inside the cocoon risking their lives to be able to finish their transformation. As a relation to the third master theme which is (3) the challenges on the process to transwomanhood, transwomen transitioned by undergoing different processes: hormone replacement therapy (HRT) and sex reassignment surgery (SRS), facing the obstacles and risking their lives just to transform themselves into what they feel like they are supposed to be. The last stage is completing the metamorphosis where the pupa emerges into its complete
form, butterfly, flying freely with its wing that were not there in the first stage. To pertain this
with the fourth master theme, (4) the outcome of the transition, transwomen felt more
comfortable of their new form, they finally completed the transition, fulfilling their dreams when
they were still young. In connection with the fifth master theme, (5) their perception of their new
selves, they finally gained the confidence, liberation or freedom and felt the wholeness which
makes them be able to “fly” freely in our society.

4. CONCLUSION
The phenomenological study came up with five (5) master themes in the experiences of men who
undergo/underwent the process of Transwomanhood. The five (5) master themes are as follows:
   A. “I’m not a man; I’m actually a woman” IDENTIT Y DELINEATION
- This master theme addresses the different perspectives of being a transwoman. It has three
superordinate themes; (1) Discomfort, the co-researchers explains they experience discomfort
when they continue on keeping their gender identity as a secret. (2) Disparity, the co-researchers’
realization that their gender identity is different from their biological sex. (3) Pride, the co-
researchers were not ashamed of being who they are, a transwoman.
These superordinate themes supports the identity delineation the co-researchers experience in
their struggles of how they view themselves.
   B. “Dahil gusto kong maging babae.” “Because I want to be a woman” FACTORS THAT
   AFFECT THEIR DECISION
- This master theme addresses the feelings of the co-researcher that they want to be a female
since they were young. It also describes the reasons as to why they want to pursue their decision
in transitioning. It has two superordinate themes; (1) Enlightenment, this is when the co-
researcher discovered the concept of a transwoman, which helped them to know who they really
are. (2) Hopes and Dreams, this the co-researchers’ feelings that they will become happier when
they reached their dream of becoming a woman.
The two aforementioned superordinate themes are the concluded reasons as to what affects their
decision to push through with transitioning.
   C. “It wasn’t easy...” CHALLENGES ON THE PROCESS
- This master theme addresses the struggles and problems they experience during the transitional
process. The problems they faced before, during and after the process is mentioned here. This
has six superordinate themes that connect with their struggles; (1) Lack of Parental Support, the
parents of the co-researchers do not support their decisions because of their lack of knowledge
about the concept of being a transwoman. (2) Discrimination, the co-researchers stated that there
are still a lot of hate crimes against transwoman, making them fearful of what may happen to
them. They also mentioned that society has negative impressions in being a transwoman, only
tolerating their existence. (3) Misconception, society cannot understand what transwoman is and
what is gay, they only assume that a transwoman is a person who undergoes GRS, when it
actually is not the case. (4) Health risks, the co-researchers stated that pursuing HRT might have
negative side effects in their health, making them struggle with their decision. (5) Fears, they have a harder time pursuing SRS, the final stage to finally become a woman, because of their conflict with their religion, fearing that they might be given divine retribution because of their acts. (6) Finance, the co-researchers stated that they do not have enough money to pursue HRT, most especially SRS if they want to complete their transition.

All of the above mentioned the different struggles they face when transitioning; concluding that the journey to Transwomanhood is a thorny path, and is not as simple as some think.

D. “I don’t see a man in me anymore.” OUTCOME OF THE TRANSITION
- This master theme addresses the SRS/GRS results, that after transitioning to a full woman they have become more accomplished in life. It has three superordinate themes; (1) Fulfilled Dreams, the co-researchers stated that when they are taking HRT/SRS it gives them the feeling that they are a real woman inside, fulfilling their dreams/desires. (2) Success, the co-researchers become more successful in making their decision in life because there are no more barriers anymore. (3) Joy, whenever they look at the mirror, the co-researchers feel that they are happier seeing themselves now because they are more comfortable with their new figure.

From the stated superordinates, it can be concluded that they have become more confident, more free to make their decisions ever since after their surgery.

E. “I am complete now…” PERCEPTION OF NEW SELF
- This master theme addresses the feeling like they found the missing piece in their life when they finally have the body of a woman. It contains three superordinate themes: (1) Confidence, the co-researchers gain higher self-esteem due to their new body transformation. (2) Liberation, the co-researchers stated that they finally feel free after years of being chained in a man’s body. They feel more liberated now that they are living a true life. (3) Wholeness, the co-researchers’ feeling that they feel like a whole person now, that all the missing pieces have finally come as one picture.

All three superordinate themes conclude that their new perception of themselves after the surgery is positive and gives fruitful results.

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SUSTAINABILITY EDUCATION, DISABILITY AWARENESS, AND DISABILITY INCLUSION IN THE HIGHER EDUCATION

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ABSTRACT

The United Nation Convention on the Human Rights of Persons with Disabilities (CRPD) recognizes the equal rights of all persons with disabilities (PWD) to get education at any level and the rights of being included in the community. The CRPD also identifies that disability awareness is one of the most important element in effectively promoting and enacting the idea of an inclusive society for people with disabilities. This paper aims to describe the author and colleagues’ struggle to develop disability awareness training in higher education institution in Indonesia where disability issues is still invisible in policy and academic discourse. To discuss disability awareness in the higher education institution, the author employs the qualitative method that allows the use of subjective experience of the researcher as a source of knowledge. The results reveal that the realities of persons with disabilities in Indonesia is still discouraging due to exclusion and low expectation caused by negative disability awareness among society. In conclusion, disability inclusion regarding sustainability in education is a question of how well persons with disabilities are accepted by Indonesian society as part of diversity, and as rights holders who have the same rights as all citizen without disabilities.

Keywords: Disability awareness; Disability inclusion; Diversity; Higher education; the Human Rights of Persons with Disabilities

Introduction

The CRPD recognizes the equal rights of all PWD to get education at any level (Article 24) and the rights of being included in the community (Article 19). It “making social inclusion and community living not only socially just, but also a legal right” (Muir and Goldblatt, 2011, p. 630). Hence, inclusion and education are two key part of the CRPD, which includes 33 core articles covering all areas of life.
The CRPD issued on 13 December 2006, and became fully operational in May, 2008 (UN ESCAP 2010, p.1). The purpose of the CRPD is to promote, protect and ensure the full and equal enjoyment of all human rights and fundamental freedoms by all persons with disabilities, and to promote respect for their inherent dignity (The UN CRPD, 2007, p. 5). It also made PWD legally visible in their societies and at the international level (Ollerton & Horsfall, 2013, p. 619).

Article 24 of the CRPD consists of five points which stipulate leading mandate:

1. Recognize the right of PWD to education, without discrimination. It promotes an inclusive education system at all levels on the basis of equal opportunity and freedom from exclusion from the general education system on the basis of disability., shall ensure that reasonable accommodation is provided to PWD.

2. Take appropriate measures to employ teachers, including teachers with disabilities, and to train professionals and staff who work at all levels of education. Such training shall incorporate disability awareness and the use of appropriate augmentative and alternative modes, means and formats of communication, educational techniques and materials to support PWD.

Meanwhile, education is regarded as key to addressing sustainable development, as an integral part of the solution to the world’s problem and to the building of a sustainable future (Sterling, 2014). In September 2015, the United Nations Member States adopted the 2030 Agenda for Sustainable Development which includes 17 sustainable development goals (SDGs) and 169 targets. This will influence the direction of global and national policies relating to sustainable development until the 2030. There are 11 explicit references to persons with disabilities in the 2030 Agenda, and it means 193 countries of the UN member states must include PWD in their national plans for implementation and monitoring.

Furthermore, the SDG 2030 goal 4 concerning quality education, stipulates: ensure inclusive and equitable quality education and promote life-long learning opportunities for all. References ‘for all’ include all persons with disabilities - people with different types of impairments and support requirements; women with disabilities (CRPD article 6) and children with disabilities (CRPD article 7).

Sustainable development is the process of getting development which meets the needs of the current generation without compromising the ability of future generation to meet their needs (Johnston, 2007 cited United Nation, 1989). Higher education such as universities are highly expected in making a just and sustainable future, through its lectures and study programmes, which create a new mentality of sustainable development to their civitas academica, as well as general
public and the new generations. This is also the reason for the importance of being inclusive education.

**Indonesian context**

Indonesia signed the CRPD on March 30, 2007, and ratified it on November 30, 2011 (The United Nations Treaty, 2012, p. 2). This ratification was enacted into Law Number 19 of 2011 regarding the Ratification of the CRPD. Then, the CRPD was incorporated into Number 8 of 2016 concerning people with disabilities. This is the most recent regulation on disability to supersede the Law Number 4 or 1997 concerning Disabled people, which considered no longer appropriate to the paradigm of the need of PWD. This acknowledged that the Indonesian Government took a significant step to strengthen Indonesia’s commitment to promoting the human rights of PWD.

Nonetheless, those significant steps by the Indonesian Government will not, on its own, ensure its full implementation (The CRPD, 2007, p. v). It required determination and active participation from all parts of society. Until recently, Indonesian PWD confront complex issues derived from both actual impairment and social determinants, such as marginalisation, stigma, prejudice, and exclusion in society by, for example, neighbours and schools (Byrne, 2002; Fuad, 2008a, 2008b; Komardjaja, 2001a, 2001b; Sirait, 2008). Equality for PWD and their inclusion into society require increased awareness of the needs and rights of those with disabilities, and a variety of ‘enabling’ strategies (Stevenson, 2010, p. 37).

Research evidence indicates disability awareness-raising is a key measure in creating inclusive communities for people with disability (Beckett, 2009; Safran, 2000). The challenge remains to transfer these research results to very different contexts such as Indonesian higher education institutions and civitas academica. Thus, literature about disability and PWD in non-Western contexts, moreover in Indonesia, is difficult to locate in the existing international academic library database. Although, in reality, there were a number international organizations working within the disability sector in non-Western countries, but this experience is rarely disseminating to the academic community via international publication (Katsui & Koistinen, 2008, p. 747).

So far, disability awareness in Indonesia is mostly only ceremonial with the ritual annual conduct of an international day of people with disabilities on December 3rd which has done little to change the lived experience of people with disabilities (Fuad, 2009). Some Indonesian PWD, especially who have higher education, largely dissatisfied with these social conditions. They identified a gap between how disability awareness currently exist and how it was expected by
most PWD in Indonesia. Furthermore, disability issues is still invisible in higher education policy and academic discourse.

This raise a question: how disability awareness training in the higher education institution contribute to promote disability inclusion for a just and better world.

This paper aims to describe the experience of the author and colleagues’ struggle to develop disability awareness training in the University of Indonesia. This intended as a way to surface hidden and unheard people a voice, and to translate needs of PWD in the higher education into a social voice. This paper also expected to be able to fill the lack of documentary of disability in non-Western contexts, especially from an unexplored field of disability such as Indonesia.

**Method**

This paper employs the qualitative method that allows the use of subjective experience of the author and colleagues, who directly involved in the struggle, as a source of knowledge. (Minichiello & Kottler, 2010, p. 8). Subjectivity, as personal experience and worldviews, is valued and understood as being integral to knowledge gained in the social work research process (D’Cruz & Jones, 2004, pp.5-7)

The methods to collect data in this study followed the common methods used in qualitative research (Creswell, 2013, p. 159). These include unstructured individual interview, and group discussion. Qualitative data analysis was used to analyse the information from the interviews and the discussions followed a process as described by Cresswell (2013, pp. 182-188). In other words, Braun & Clarke (2006, p. 87), who also describe the process as a thematic analysis, explain that it consists of grouping data into themes, then examining all cases in the study to ensure all manifestations of each theme have been accounted for and compared, and then examining how themes are interconnected.

**Results**

Based on unstructured individual interview with three alumni of University of Indonesia who have disability, revealed that Indonesian PWD are slowly increasingly enrolling in universities, and there is difficult in to find official data about them due to no regulation to record their registration or enrollment. It happen in the level education institutions, even in the national data

Most higher education institutions are unfamiliar to the implication of the rights of PWD to education. Gaps exist between equal opportunity policies and everyday learning culture. Response to the rights and needs of student with disabilities who enrolls in the college and universities, mostly in the form of adjustment which is additive and reactive. Social requirement of student with disability in the campus are not fully accommodated.
Unlike their non-disabled peers, Indonesian students with disabilities often do not enjoy full integration into the learning environment. They encounter high expectation for autonomous learning and struggle to access class lectures in not accessible learning environments. Most universities' content is still conveyed through class lectures which necessitates students to attend.

No adaptive equipment provided to support their learning needs. Limited even almost no removal of architectural barriers available to accommodate the campus being accessible learning environment. No disability support services provided in campus.

All these conditions reflect lack of awareness among the university authorities, faculties’ members, and non-disabled students. They refer disability awareness basically is a condition of acceptance by the public toward PWD as a natural part of diversity and an integral part of the society; who have common needs, equal rights, and significant capabilities. Thus, existing disability awareness in the campus still discouraging. These conditions needed and could be changed for improvement of PWD's lives.

Therefore, these three alumni of University of Indonesia who have disabilities and had graduated with a postgraduate degree from overseas universities agreed to collaborate with me and a number of colleagues. We develop the Disability Studies Centre (DSC-UI) in mid-2006, as a way to improve both government and community responses to the needs of Indonesian PWD. Amidst slow and limited support and sponsors, in 2009 the DSC-UI commenced a pioneering effort to build an inclusive society by providing disability awareness training.

**Disability awareness training in the University of Indonesia**

The training was designed to include three fundamental topics:

- Basic concepts about various types of disabilities and special needs
- What it means and doesn’t mean to have a disability
- How to interact with and to help people with disabilities

These topics are implemented within six hours of training through power point presentation consisting 51 slides that also provided with disability game and simulations and discussions.

This training delivered by the trainer team consists of alumni of University of Indonesia who have disabilities and those who do not.

This training intended to enable participants from the civitas academica of the University of Indonesia (academic staffs, non-academic staffs, and students) to have understanding about disability and PWD; to adopt positive attitudes to PWD, and to behave appropriately with PWD.

It is also expected that this training can be widely implemented to various higher education institutions in Indonesia.
The outcome of the training is an increasing awareness among the nondisabled students, and academic and non-academic staffs of the University of Indonesia so that they can become change agents providing welcoming environment for people with disabilities; advocate for inclusive higher education.

The initiative to conduct disability awareness training in the University of Indonesia faced a number of technical obstacles, such as getting funding or sponsor, retrieve list of participants from every faculty, and locating time and venue which fit with participants. It seemed that the obstacles also related with the fact that at the time, discourse on disability was not considered a rights issue. Indonesia has not ratified the CRPD yet, and the Millennium Development Goal or the Sustainable Development Goal has not included disability.

Accordingly, the disability awareness training can be implemented twice on 16th February and 8th June 2009 with each 30 participants from several schools and faculty of the University of Indonesia in campus Depok.

The participants agreed that the realities of student with disabilities in Indonesia is still discouraging due to exclusion and low expectation caused by negative disability awareness among society. They confirmed that before the training, they mostly not aware to the inclusive education and the existence of student with disability in the university of Indonesia. They not fully perceive that PWD are natural part of diversity, and an integral part of the society; who have common needs and equal rights, including rights to get higher education in the university, who have potential and significant capabilities to accomplish the study. They also not aware the special need of student with disabilities, which required a reasonable and appropriate accommodations relating to learning environment.

Finally, the participants concluded that the disability awareness training has increased their understanding, empathy, and appreciation toward people with disabilities. This result is in line with the previous study which stated that disability awareness is “a positive attitude and increased empathy toward people with disabilities” (Columna, Arndt, Lieberman, Yang, 2009, p.19). The participant also confirm that the training gave them knowledge and skill in interacting properly with students with disabilities and PWD in general. They also were committed to extend this knowledge and skill to their peers and/or colleagues, and their families. This result confirm the previous studies which conclude that the training is key measure in creating inclusive communities for people with disability (Beckett, 2009; Safran, 2000). However, the participants evaluated that this training would be better if its delivery is complemented with audio visual material.

**Conclusion**

Sustainability education refer to the higher education that contribute in creating a just and sustainable future. To be so, higher education need to be inclusive for all. It means to include all PWD. They are not excluded and have equal participation to exercise their rights, primarily
rights to education. How well they are included in everyday learning culture in the university, is closely related with level of disability awareness of the university authorities, faculties’ members, staffs, and non-disabled students. When they not fully aware towards people with disabilities who are studying in the campus, the students often do not fully integrate into the learning environment. They expected to be autonomous learner, struggle to access inaccessible class lecture and learning environment. Thus, sustainability education in the higher education needs disability inclusion. Disability inclusion is related with how is disability awareness among the civitas academica in the higher education.

In sum, disability inclusion is a question of how well persons with disabilities are accepted by Indonesian society as part of diversity, and as rights holders who have the same rights as all citizen without disabilities.(2300 words)

References


Analysis of Collection and Reporting of Cash Waqf Fund by Islamic Cooperative in Indonesia

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Abstract
The aim of this research is to analyze how cash waqf institution by Islamic cooperative in Indonesia collects and reports their waqf fund. Cash waqf fund should be effectively collected by trusted cooperatives which have many members. They have to report the cash waqf fund to both the legal authority and the public. The research is conducted by qualitative method with in-depth interview and observation. Research objects are three registered Islamic cooperatives as cash waqf institution in Jakarta and Depok. The result shows that the collection process of cash waqf is not effective. Some front office staffs are not so familiar with the product. In addition, the report of allocated cash waqf fund may not be appropriately well presented.

Keywords:
Collection, report, cash, fund, waqf, Islamic, cooperative

1. Introduction
The development of cash waqf in Indonesia is quite challenging. The trend of using money as waqf asset started in the 2000s. Act No. 42/2004 on waqf which regulates cash waqf fund was issued in 2004. Then, the first cash waqf institution is Tabung Wakaf Indonesia (TWI) which was established in 2005 while the waqf institution under government authority, Badan Wakaf Indonesia (BWI), was just established in 2007. However, the practice of cash waqf may have existed before 2000s, as has been commonly practiced in Islamic boarding school (Pondok Pesantren).1

So far, the society develops waqf based on such fixed asset type as land for such social buildings as like mosque and school. Act No. 42/2004 legalized the use of money as waqf asset. It can be allocated to productive asset, current or fixed asset. The current assets among others include sukuk, deposit, and Islamic capital market, while the fixed asset must be productive like house and shop rents. Shifting paradigm in managing waqf asset, especially the current asset, from social to productive asset may not be that easy.

In 2014, there were 82 cash waqf institutions which consisted of 20 foundations, 1 governmental body, 1 organization, 2 zakat institutions and 58 Islamic cooperatives. Forty five out of 82 institutions have website.1 The government should really monitor and control the performance institution. Otherwise, it can be a problem as it involves public fund and cause less reliable. So far the report may be internal to Badan Wakaf Indonesia (BWI) and Ministry of Religious Affairs, not to the public.
Islamic cooperative which is known as Baitul Maal wat Tamwil (BMT) should have better fund raising collection program as they have niche market, their member. So far, the collected amount is not so huge and not many members would like to join in cash waqf program. This can be a problem also as cash waqf needs a big amount of fund to meet minimum scale of economics.

The objective of this paper is to analyze how Islamic cooperative collects and reports cash waqf fund in Indonesia. Islamic cooperative in Indonesia has specific captive market which should have better collection to persuade Muslim to pay waqf. The reporting should be transparent and accountable as it is public fund.

2. Literature Review

In Indonesia, waqf practice was previously regulated in Act No. 5/1960 on main agricultural regulation. This Act focuses on land for waqf, which is supported by government regulation No. 28/1977 on waqf land. This regulation permits nazhir (waqf manager) to change and reallocate waqf land to other places. In fact, some people still assume that waqf cannot be changed even for better purpose (Prihatini, Hasanah, and Wirdyaningsih, 2005; Mubarok, 2008).

However, the practice of waqf has been conducted before 1960. People in Indonesia gave waqf mainly in the form of land, but only some gave in money and jewelry. Therefore, it is necessary to have a regulation for cash waqf management as productive asset especially for Islamic money and capital market. In Indonesia, this waqf type may not be as popular as the inflation rate is quite high and this type of waqf is still new.

To be legalized, cash waqf institution must be registered by Badan Wakaf Indonesia (BWI). Of the 82 institutions, 58 Islamic cooperatives (BMT) are the biggest cash waqf institution. The 58 Islamic cooperatives consist of saving and loan cooperative (Koperasi Simpan Pinjam-KSP), multi business cooperative (Koperasi Serba Usaha-KSU) and Islamic financial service (Koperasi Jasa Keuangan Syariah-KJKS) (Alma & Priansa, 2009). Theoretically, cooperatives have better controlling function as they have annual meeting (Rapat Anggota Tahunan-RAT) by the members which evaluate the operational cooperative. Member of cooperative can actively monitor and control the activities of cooperative (Sitio & Tamba, 2001). Therefore, the role of BMT in developing cash waqf is appropriate as it has controlling function.

Mohsin (2013) states that cooperative can be one of waqf scheme. This relates to group of community. In case of Indonesia, cooperative is practiced by society which is specific to related group. It is supervised by the Ministry of Cooperative and Small and Medium Enterprise. If cooperative can be cash waqf institution type, the income should not be shared to the members.

3. Research Methodology

The research is based on qualitative method with post positivist paradigm. The research objects are two main Islamic cooperatives (BMT) in Jakarta and a branch of Islamic cooperative in Depok. Totally, there are six registered Islamic cooperative as cash waqf institution in Jakarta Bogor Depok Tangerang and Bekasi (Jabodetabek). All Islamic cooperative firstly are contacted by phone to early mapping study. In fact, not many cooperatives are familiar with cash waqf even though they have been registered at BWI. In addition, one cooperative is inactive and
another one lacks of cash waqf program. From this screening, we can assume the management of cash waqf by Islamic cooperative may not be quite good.

Trustworthiness of the research is ensured by checking the credibility, transferability, dependability and confirmability. Credibility is measured by triangulation, and other sources of information are gathered. Transferability is ensured by purposive sampling with multiple case studies. By doing so, we can see the similarity in other cases. Dependability is ensured by research procedure and method, and confirmability is measured by data trail and documentation.

Table 1: Filter case of cash waqf institution

<table>
<thead>
<tr>
<th>Description</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total registered BMT</td>
<td>6</td>
</tr>
<tr>
<td>Not active</td>
<td>(1)</td>
</tr>
<tr>
<td>Not available</td>
<td>(1)</td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
</tr>
<tr>
<td>Not clear</td>
<td>(2)</td>
</tr>
<tr>
<td>Selected cases</td>
<td>2</td>
</tr>
<tr>
<td>Branch in Depok</td>
<td>1</td>
</tr>
<tr>
<td>Total selected cases</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: Data

4. Analysis

As cash waqf institution, BMT collects cash waqf from their members and society. While it is mainly used for social activities, it should have been allocated in productive assets. The result can either be used for the beneficiaries or the institution’s operational activities. In addition, cash waqf activity is not discussed in the annual meeting (RAT). Functionally, BMT collects cash waqf and mainly allocates it to social programs.

The observed BMTs have not particularly disclosed any financial statement of cash waqf, especially for financial position but they have claimed to have periodically reported to BWI every 3 month. Even worse, these institutions did not report the performance of waqf fund online even though they have website. Should they have reported financial statement by online, this can be a trigger for people to join in cash waqf program.

Table 2: Sample of registered cash waqf institution

<table>
<thead>
<tr>
<th>Name</th>
<th>Membership</th>
<th>RAT</th>
<th>Waqf type</th>
<th>Website Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Al Azhar</td>
<td>Closed</td>
<td>Not discussed</td>
<td>Mixed</td>
<td>No</td>
</tr>
<tr>
<td>Daarul Quran</td>
<td>Requirement</td>
<td>Not discussed</td>
<td>Social</td>
<td>Yes</td>
</tr>
<tr>
<td>Tamzis</td>
<td>Open</td>
<td>Discussed</td>
<td>Mixed</td>
<td>No</td>
</tr>
</tbody>
</table>

Source: Data

From those three BMTs, only BMT Daarul Quran promotes cash waqf in their website. They put information of cash waqf in the banner. They also have different types for membership and waqf type allocation. The government should regulate and standardize these differences in order to create better comparison.

BMT Tamzis may have better characteristic for nazhir as they have open membership option for wakif. They also discuss cash waqf program in the annual meeting. While waqf
program allocation is mixed, they allocate both to productive and social assets. But, they do not disclose waqf information explicitly in their website (see figure 1).

Figure 1. Receipt of Waqf (BMT Tamzis) and website info

Source: Data

BMT Tamzis has prepared their staffs for providing information on cash waqf to customers. They respond some questions regarding waqf very well. They also separate waqf account and also in the form (see figure 1). In the brochure, it is stated that they manage cash waqf fund into productive asset (see figure 2) the result of which is allocated to beneficiaries. In the brochure, they state that money from wakif would be invested in productive asset. But, in the further explanation they also allocate directly to social assets such as praying clothes, Quran, sarong, etc.

BMT Al Azhar has different characteristics of closed membership and does not discuss cash waqf fund management in the annual meeting. They do not specify in detail how they manage and allocate the cash fund. If they have closed membership for cooperative, so they may treat wakif only as depositor in Islamic bank. The cooperative may not have additional capital and wakif cannot monitor cash waqf fund as they are member of cooperative. In the form, the separate account for cash waqf is not available. They should have separate account for cash waqf and report to wakif in order that the fund may not be mixed with others.

Figure 2. Information on Waqf (Brochure of BMT Tamzis)
Figure 3. Receipt of Waqf (BMT Al Azhar)

Source: Data

Figure 4. Receipt of Waqf (BMT Daarul Quran) and Brochure (website)

Source: Data
Only BMT Daarul Quran does have specific information on cash waqf in their website (see figure 4). It is stated that they would manage cash waqf fund in the productive asset. Then, the result of cash waqf fund investment would be allocated to social activities. In fact, cash waqf fund is socially allocated to the development of school building. This is different from the information in the website. Meanwhile, wakif can be a member of Islamic cooperation if they have business with the cooperative. While, the form of waqf fund is based on voucher with the amount of Rp250.000 and Rp500.000. The cooperative also provides specific form for larger amount of cash waqf.

Figure 5. Bar chart Information on Waqf Payment (BMT Tamzis)
The important issue in the cash waqf institution in Indonesia is the accountability. Cash waqf institution is obliged to prepare a report to Badan Wakaf Indonesia (BWI) and the Directorate of Wakaf Ministry of Religious Affairs. This is compliant with the government regulation No. 42/2006 article 13 and Regulation of the Ministry of Religious Affairs No. 4/2009 article 9. So far, these institutions do not publicly disclose the performance of cash waqf asset. Only BMT Tamzis does provide the amount of receipt from wakif in monthly bar chart for six months period (see figure 5).

From figure 6, we can see that there are 44 wakifs who quite routinely pay cash waqf. The amount is quite small. From this we can argue that not all members of BMT join in cash waqf program. This may have implication to the economics of scale of cash waqf which needs quite large fund to get optimum income for social activities and operational expenses of the management.
5. Conclusion
The collection of cash waqf by Islamic cooperative BMT may not be effective as the fund raising program is passive and only few members of cooperative joined in the cash waqf program. This may result in ineffective management of cash fund and failure to meet the minimum economics of scale. The reporting of financial statement of cash waqf has not met the required standard. Cash waqf institution needs specific accounting standard as the characteristics is different from zakat institution. The characteristics of cash waqf institution are similar to Investment Corporation which manages their fund to generate income through such businesses as takaful, mutual fund, pension fund, and Islamic bank. In addition, the reporting to one government body should be effective to create clearer accountability.

6. Reference
“KAMATAYAN MO, ANG IKINABUBUHAY KO”
(YOUR DEATH IS MY LIVELIHOOD): EXPLORING
THE LIVES OF EMBALMERS

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ABSTRACT

The death of a loved one is a very sensitive issue and one must be taken with seriousness. In the Philippines, we give utmost importance to wakes, more especially if it is someone close to us. Funeral parlours are established to cater wakes. Employed in these funeral parlours are the embalmers, who have the primary task to process the dead body for presentation in wakes. This study aims to look at the lived experiences of these embalmers, raise public understanding and appreciation of their role in the society.

To do this, the researchers used a qualitative method of obtaining data from these embalmers. Five of them were selected using a purposive sampling method. From the transcribed interviews, their statements were analyzed using the Interpretation Phenomenological Analysis (IPA). The gathered data produced three (3) master themes, which are (1) their reasons in becoming an embalmer; (2) the challenges in their roles; and (3) how they cope with those challenges. The researchers concluded that income, proficiency, and heritage are the most common reasons for people to enter the embalming profession. The researchers also found out, that embalming is a challenging work because there are certain requirements to take into account in doing this job such as health issues and the demands made by their clientele. In addition, embalmers feel that the public tends to belittle them, and thus they see this as a challenge in performing this role. Finally, the researchers also concluded that embalmers go on with their jobs despite the challenges they face because of their coping mechanisms, such as observing certain safety measures, creating motivation for themselves, and being proud of their craft.

The researchers recommend that the public recognize the work of embalmers, to understand their plight, and for them to have a better perspective on this profession.

Keywords: CADAVER; Death; Embalmer; Embalming; Funeral Parlor

1. INTRODUCTION
Death is something that is inevitable. Usually, it happens in the most unexpected time. A death of someone is a big loss for his/her family. But there is a quotation that says, “One man’s loss is another man’s gain.” This saying made the researchers eager to know who benefits on a death of someone.

According to Mitchell IV (2015), embalmers do most of the treating of a dead body in a process called embalming. Embalming is a process where the human cadaver is being preserved to stop decomposing for a short time to be suitable in displaying in wakes (Oladele, 2015). Mitchell IV (2015) added that, normally, it is preserved relative to the duration in which the bereaved family wishes to mourn over it. After the mourning period, the cadaver ceases to be preserved, and therefore proceeds to the normal process of decomposition.

Embalmers work in hospitals, medical schools, funeral parlors, and in morgues. They are responsible for disinfecting the cadaver to prevent the spreading of any diseases (Mortician School, N.D.). This occupation is an indeed extraordinary work but still many people are paying a lot to continue this form of service even though they are unaware of what it is all about (Mitford, 1993). Furthermore, embalmers assist in preparing the bodies for autopsies.

This qualitative study aims to introduce the lived experiences of embalmers to inform everyone about this exquisite occupation and the feeling of doing this kind of responsibility. This also includes on how they handle different situations especially in handling a lifeless human body and their major roles in our society.

Being an embalmer is a profession which contributes a huge part in our society. Many people thought that the work of an embalmer is something creepy and unusual to do because they only knew that being an embalmer is just cleaning and preparing the corpse but they are not aware that being an embalmer is challenging. They have the rights to be respected and to be admired by everyone because this is a noble profession. An embalmer has a big responsibility not only to the ‘patient’ but also to the family of the dead. They need to make sure that the cadaver is presentable during its wake; so that the family won’t have a hard time to say goodbye to their loved one.

Embalmers practice their profession in two (2) to three (3) years before they can take the licensure exam. Their job is important not just because they are the ones who prepare the body for the last time, but because they are the one who is ready to.

2. METHODS
This study seeks to portray the life and experiences of an embalmer. It does not seek to resolve a problem in that field. However, this study shall answer questions such as: WHO are embalmers; WHAT is the job of an embalmer; WHEN are they needed; WHERE can you find them; and HOW does one become an embalmer, and the like.
Therefore, the researchers decided to adapt the qualitative research design. This research design is used when researchers want to capture the current phenomenon, to describe "what exists", regarding conditions in a particular situation. Thus, the descriptive research design cannot conclusively answer "WHY" questions.

2.1 Selection of the Study

Information that is first-hand is one of the best and most credible (Vieregge, N.D.). As the saying goes, “Experience is the best teacher” (Proverbs, N.D). The researchers share the same belief. As such, they have decided to extract information from the performance of the embalming process themselves. They have selected five (5) male embalmers who have been working for more than 3 years in a funeral home whose ages are ranging from 35-50 years old.

2.2 Sampling Procedures

There are different techniques used to choose different samples for a study. Among them is purposive sampling, which the researchers decided to adapt as their sampling technique. As Black (2010) defined it, purposive sampling is a sampling method where the researchers select samples in accordance to their study’s objectives. A specific type of purposive sampling is the homogeneous sampling where the samples must be uniform as regard a certain of characteristic (Crossman, N.D).

In this study, since the researchers aim to explore the field of embalming, then it is justifiable that the respondents possess characteristics that will help the researchers in their aim. In addition, the respondents must be varied in terms of their experiences, their working environments, and possibly their heritage, among others. As to their homogeneity, the researchers have decided to pick an all-male roster to form part of their sample. It must also be noted that the embalmers that were selected were willing to share information and that their consent (that their statements are to be used in this study) were obtained.

2.3 Research Locale

This study was conducted in the place and time where the researchers and co-researchers agreed upon, in consideration of the co-researchers’ condition that they be interviewed in a setting where they feel comfortable to answer the researchers’ questions, specifically in the funeral parlors where they are working.

2.4 Research Instruments

1. Aide memoir, which is a list of the questions that were asked to the co-researchers;
2. Approval sheet, which is a letter addressed to the office of the funeral home, seeking permission for us to conduct an interview with their embalmer;
3. Informed consent, which is an agreement between the researchers and the co-researchers. The informed consent contains the terms and conditions, along with the rights and privileges of the co-researchers throughout the process of the study;

4. Pre-qualifying form, which is used by the researchers as a tool for analysis of the co-researchers’ qualifications, based on the results of their answers;

5. Reflexive journal, which is a tool where the reflections of the researchers about the interviews were written; and

6. Voice recorder, which is a tool to record the interview. After the interview, it was used by the researchers in transcribing the conversation between the researchers and the co-researchers. It also served as evidence and proof that such conversation exists.

2.5 Data Gathering Procedure

In order to ensure the credibility of the information which the researchers gathered, the source of that information had to come from people who had first-hand experiences in that particular field. On the other hand, the data has undergone an appropriate procedure to ensure the validity of it.

In this study, in-depth interview is the procedure the researchers chose. This is because in an in-depth interview, the participant is given the opportunity to openly answer each question thrown to them by the researchers. The interview would best capture the information the researchers would want to obtain from the participants because they would be able to narrate their experiences in detail.

Published articles, online and offline, also provide bits of information that is relevant for the study. Thus, the researchers search for these relevant articles via a visit to the library, or browsing through the internet.

2.6 Data Analysis

The purpose of Interpretative Phenomenological Analysis (IPA) is to study how your participants are living with their experiences (Smith and Osborn, 2007). Stated by Smith and Osborn (2007), these are the stages of interpretative phenomenological analysis (IPA):

1. Looking for Themes in the First Case

The researchers read the accumulated information many times. The researchers wrote down the interesting and believable answers of the participants. The theme titles collected will serve as a guide for others cases.

2. Connecting the Themes

The themes are listed in a sheet of paper, researchers seek for similarity and relevance between the collected themes. The initial list is arranged chronologically based on the order
which came up in the transcript. The next stage implicates a logical or analytical and hypothetical ordering as the researchers tried to connect the themes gathered. Some themes will clump together, and some may come up as superordinate concepts.

3. Continuing the Analysis with Other Cases

Researcher’s transcript can scribble as a topic in its own way, the analysis to embody interviews with a lot of dissimilar particular. One can either use first or second case to initiate the sub-sequence analysis or put the list of themes for researcher.

4. Writing up

The final step is to write up and finalize the gathered statement from the lived experiences of the participants. This stage focuses on translating the theme into narrative form.

It had two strategies, the first is the ‘results’ section that has the critical thematic analysis. The other one is ‘discussion’ links that works on literature.

3. RESULTS AND DISCUSSION

3.1. Findings

The Interpretative Phenomenological Analysis (IPA) of the five (5) in-depth interviews produced three (3) master themes. They are:

- “…kailangan nating mabuhay…” (“…we need to live…”) The reasons for being an Embalmer
- “Napakahirap dito…” (It’s very difficult here…) Challenges on performing their role
- “…dapat maiayos ko yung trabaho ko…” (“…I need to do my job well…”) Coping strategies

Three (3) master themes were generated from (9) superordinate themes. The said superordinate themes are:

- **Income** - The participants stated that the income they earn is enough to give the basic needs that a family must have.

- **Proficiency** - One of the participants stated that his relatives are embalmers as well, that is why he got used to embalming. He saw the process and he studied it carefully. And with passion for embalming, along with the experience, some embalmers’ job seemed to be easier. Some of them were expose early on the field that is why they have knowledge about embalming. They got used to it and became a routine for them.
• **Heritage** - The skills in embalming are commonly passed from generations, which helped them to work easily. Many of them are raised and grew up in the field of embalming as their family manages funeral parlors or even an embalmer themselves.

• **Health** - This superordinate theme pertains to the specific struggles that the embalmers commonly experience in their job and how they overcome these circumstances in spite of the diseases they can get in performing their job.

• **Demands** - Some factors that contribute to the challenges of the participants is beautifying the cadaver especially if there are requests from the family of the dead.

• **Belittlement** – This is one of the common struggles of an embalmer. Some people think that being an embalmer is disgusting or otherwise scary.

• **Safety Measures** - Safety must always come first in order to work well. This superordinate theme aims to know how the participants prevent diseases.

• **Motivation** – The participants distinguished their motivations to continue and pursue their jobs despite of the challenges they encounter.

• **Pride** - This superordinate stated the coping strategies that the participants do despite the belittlement they experience form others.

These themes will serve as acknowledgment of possible accounts of the lived experiences of embalmers. They do not highlight everything about the experiences of the participants; they were selected according to its importance to the research paper. The creation of the themes is a subjective form of interpretation by the researchers. Even though comments from the participants form part of the same themes, they exhibit some differences, in addition to their similarities.

The interviews with the participants were recorded using the researchers’ mobile phones. In transcribing the recorded interview, some changes were introduced to improve the readability of the transcriptions. An ellipsis inside parentheses (…) represent missing items, and words placed inside brackets [xxxxx] mean that words are added to complete the thought of the participants’ statements.

3.2 **Simulacrum**
This image represents the lived experiences of embalmers. The embalming room depicts the three master themes and nine superordinate themes. The equipments represent the first master theme which is their reason for being an embalmer. The bed where the process of embalming took place is the reason why they earn their income. The embalmers’ hand signifies their proficiency in doing their job and their family where they inherit their knowledge in doing this kind of profession. While the chemicals represent the second master theme, which is the challenges in performing their role. The tools they use represent the diseases they can acquire from their work; the make-ups represent the demands of the bereaved family and the people who are watching them from the viewing room shows the belittlement they received. Lastly, the embalmer, himself, signifies the last master theme, which is his own coping strategies to overcome the challenges they encounter in their work. The safety equipments represent the safety measures they observe in embalming, his mind represents his own motivations to continue their work and lastly, his heart symbolizes his pride for doing a unique and noble job.

4. CONCLUSION

Using the Interpretative Phenomenological Analysis (IPA), the statements gathered from the participants were analyzed where three (3) master themes. The three (3) master themes are:
1. "...kailangan nating mabuhay..." ("...we need to live...") The Reasons for Being an Embalmer:

The participants' respective varying reasons for entering the embalming profession were related to the researchers. These reasons have largely affected their lives, because at one point, on the onset of their being an embalmer, they had to make a major decision. These reasons are: (1) Income is stable because their job is one that never loses demand, as death is an inevitable event in a person's life. (2) Proficiency, the participants feel that this is the field, which fits well to their skill set. The technique of embalming has to still be learned, though. (3) Heritage, embalming is a skill that can be pass down from one generation to another. Moreover, men born of families who do embalming, according to the interviews, have more or less become embalmers themselves.

2. "Napakahirap dito..." ("It’s very difficult here...") Challenges in Performing Their Role:

The participants identified and described the challenges they have met in performing the embalming process. Their work is a tedious one and requires being meticulous, and it is therefore a huge challenge to conform to the specifications set by their clientele. These challenges they encounter are: (1) Health, just like other jobs, embalming can be draining for the one performing it. Thus, it is necessary that an embalmer make his health a priority, otherwise he will not be able to do his job for a certain period, making him lose potential income. (2) Demands, one of the most challenging part of an embalmer is to conform to the demands of the deceased person's relatives. Some relatives of the dead they service have weird and demanding specifications, which could possibly make the embalmer's work more difficult than it should be. (3) Belittlement, being called a "mere" embalmer is something they have been used to, and it is a challenge for them to prove these misconceptions and prejudices wrong.

3. "...dapat maiayos ko yung trabaho ko..." ("...I need to do my job well...") Coping Strategies:

The participants shared their strategies of coping up with the challenges they described. They had also shared how they employ these strategies in response to the misconceptions many people have towards them. These coping strategies are: (1) Safety measures, embalming comes with its own hazards. Naturally, the participants have to employ certain safety measures to protect themselves from these hazards. They have described to us these measures, along with how it is done. (2) Motivation, with the rigors of the embalmers' lives, it is easy for them to feel down and beaten. In order to continue with their work, they find ways for them to be motivated internally. (3) Pride, most people are proud of what they have accomplished, most especially if they see the value of their work, and its contributions to the society. The participants give an account of how proud they are with their work.

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6. REFERENCES


THE IMPACT OF PARENTAL INTERNATIONAL MIGRATION ON CHILDREN WELFARE IN INDONESIA

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ABSTRACT

Indonesian people often do international migration, especially for working abroad. Working abroad is considered become a solver from the labor’s problem in Indonesia, as lack of job and the low wage rate. According to National Agency for Placement and Protection of Indonesian Migrant Workers (BNP2TKI), the number of Indonesian migrant workers in 2016 amounted to 234,451 people that spread across 145 countries in the world. International migration’s phenomenon that be done by parents has positive and negative impact. The positive impact from international migration is increasing economic welfare either for them selves or family left behind in Indonesia. While the negative impact is losing the parents role in children’s growth that can affect the other aspect of children welfare like education and health.

This study aims to find out the welfare of children whom their parent do international migration compared to children whom their parent doesn’t do international migration using logistic regression methods. Due to data limitations, the children welfare that will be observed are education and health. Based on National Socio-Economic Survey (Susenas) 2015 data, either Socio-Cultural and Educational Modules or Consumption/Expenditure Modules, shows that children with migrant parent less likely to be healthy compared to children with no migrant parent. But, parental international migration doesn’t have statistically significant effect on education of children left behind. Therefore, government attention’s is needed to increase the welfare (especially in health) of children with migrant parent.

Keywords: Children welfare; Education; Health; Parental international migration

1. INTRODUCTION

The number of Indonesian people based on population census data 2010 amounted to 237 millions people, and it made Indonesia in the fourth country with the biggest people after China, India and United States of America. Great number of people make population problem, one of them is labour’s problem. In essence, country which has a lot of people has a lot of labour too. It
could be the advantage to Indonesia if the labour are healthy, active and productive in the labour market. But, it could be a boomerang for this country. In fact, a lot of labour not equal with the number of job in Indonesia. So, most Indonesian labour choose to working abroad then we called Indonesian Migrant Worker or Tenaga Kerja Indonesia (TKI). Besides the lack of job in Indonesia, the more expensive wage rate in foreign is the reason of the labour working abroad.

The shipment of TKI to foreign is common phenomenon and it had happened year to year. The number of TKI which was sent is great and spread across countries in the world. According to National Agency for Placement and Protection of Indonesian Migrant Workers (BNP2TKI), the number of Indonesian migrant workers in 2016 amounted to 234,451 people that spread across 145 countries in the world. This number even reached twice before the sending TKI restriction’s policy to several country are held. Trend of previous five years, the number of Indonesia migrant worker who worked in foreign was 586,802 people in 2011, 494,609 people in 2012, 512,168 people in 2013, 429,872 people in 2014 and 275,736 people in 2015.

Make a decision to work in foreign is not easy. There is a lot of think which influences the decision to migrate, in this case is to working abroad. Lee (1966) found that there were four factors which impact the migrate’s decision: push factors exist at the point of origin, pull factors exist at the destination, intervening obstacles and individual factors. Either at the origin or the destination has positive and negative factors which can affect people to stay in the origin or move to the destination place. Moreover, there were obstacles between origin and destination that hinder migration, like distance, facility, transportation cost, regulation and the household’s member who are followed migration. The obstacles can be solved by some people who decide to migrate. But, it can’t be solved by others so they decide to stay in the origin. Meanwhile, Ravenstein developed seven laws of migration. One of them said that economic motive is the most motive to migration.

In line with the Raveinstein’s theory, economic motive is the main motive of the TKI to working abroad. Syahriain (2007) in Safrida (2008) said that Indonesia migrant worker’s motives that push to working abroad are limited job opportunities, low wage rate and poverty. TKI left Indonesia to find a better live in other country. Indonesia migrant worker aims to increase the welfare, either for them selves or family left behind in Indonesia.

The positive impact from international migration is increasing economic welfare either for them selves or family left behind in Indonesia. But, international migration has the negative impact, especially for children left behind. Indonesian migrant worker often even always left the family in Indonesia, either their spouse (husband or wife) or their children. The negative impact is losing the parents role in children’s growth that can affect the other aspect of children welfare.

Children welfare is one thing that should be concerned in order to prepare a quality generation which has potential to build the nation in the future. Children welfare is one of the children right. The Laws of Indonesian Republic No. 4/1979 about Children Welfare said that children shall be entitled to welfare, care, upbringing, and guidance based on affection either in their families or in special care to grow and develop properly. Moreover, the law said that children welfare is a life
order and a child’s life that can guarantee their growth and development properly, spiritually, physically and socially. From the definition, children welfare is a complex thing, not only measured by physically but also by spiritually and socially. So, measured children welfare is not easy.

United Nations of Children Fund (UNICEF) designed an indicator to count the children welfare. Children welfare indicator is a composite indicator which is constructed from some indicator. Children welfare consist of five dimensions, there are material well-being, health and safety, education, behaviour and risks, housing and environment. Each dimensions consist of some components and each components consist of some indicators. Due to the data limitation, the children welfare that will be observed are education and health.

Education is one of the factors that will determine the children welfare. School enrollment ratio is one of the education indicators that can describe the children welfare. School enrollment ratio is proportion of all in school children in one age group with number of people in that age group. Susenas data in 2015 described that formal school enrollment ratio was good, especially in 7-12 years old and 13-15 years old. Formal school enrollment ratio of people 7-12 years old is 98,57, it means 98,57 percent of people 7-12 years old went to formal school. For people 13-15 years old, formal school enrollment ratio is 94,25. School enrollment ratio of people 16-18 years old is still low, only 70,26.

The others children welfare aspect which is important is health. Children can do activity, study and recreation if they are healthy. One indicator which can describe the health condition is morbidity rate. Someone is said sick when he has health complaints during a last month and disturbed his daily activities. Data from The Profile of Indonesian Children 2015 showed that the percentage of children who fell sick during the last one month in 2014 amount to 15,26. Children who fell sick during the last month are 14,74 percent in urban area and 15,75 percent in rural area. Moreover, there is no significant different on percentage of children who fell sick during the last one month by sex and residence.

Education and health are part of the children welfare which are important to develop children quality in order to nation’s development in the future. Parental international migration have negative impact on children education and health. Ming-Hsuan Lee (2011) found that parental migration is statistically significant affect children education. Children with no migrant parent have the greater school enrollment compared to children with migrant parent. The other study by Gianna Claudia Giannelli and Lucia Mangiavacchi (2010) found that parental migration has a negative effect on school attendance for children left behind. The negative effect on school attendance in the long term was related to dropped out. Ming-Hsuan Lee (2011) found that there was no significant effect from parental international migration on children health status, but children with migrant parent is more likely to smoke. Smoke is unhealthy behaviour that can affect the children health. In line with the result of Ming-Hsuan Lee study, Gao Yang, et al (2010) found that children with migrant parent have higher risk of unhealthy behaviour, like skipping breakfast, smoked tobacco, drunk alcohol and overweight.
According to the projection of population census data 2010, the number of children in 2015 is 83.1 millions or 32.55 percent from all population. In the other word, one from third people in Indonesia is children. Furthermore, many children are left behind by their parents because of international migration. Therefore, this study aims to find out the impact of parental international migration on the welfare (education and health) of children left behind in Indonesia.

2. METHODS

2.1. Data and Unit Analysis

This research use National Socio-Economic Survey (Susenas) 2015 data, either Socio-Cultural and Educational Modules or Consumption/Expenditure Modules. Susenas data is choosen because it has information about children with father and/or mother who done international migration, and children welfare. Because of the data limitation, children welfare that will be observed are education and health. Moreover, Susenas data provides information about social economic and demography characteristic of children.

Susenas is routin survey which is held by BPS- Statistics of Indonesia. On September 2015, Susenas which is held are Susenas Core, Socio-Cultural and Educational Modules, and Consumption/Expenditure Modules. The number of sample size is 75.000 household which can estimate until province level.

The data which is used are parental migration data, children welfare data (limited to children education and health), and children characteristic. Parental migration data in Socio-Cultural and Educational Modules of Susenas consist of internal and international migration. In this research, parental migration is limited to international parental migration.

Unit analysis in this research is children 5-17 years old whom both parent are still alive. The Laws of Indonesian Republic No. 23/2003 about Children Protection said that children are someone whom age less then 18 years old, include children in the womb. But, the children age is limited to 5-17 years old because of the education data limitation. The children education data is asked to people 5 years old or over. Limited to unit analysis in this study, the sample size is 66,079 children.

2.2. Variable

The dependent variable in this research is children welfare. Children welfare is consist of education and health. Education variable which is used is school enrollment. School enrollment is the children status of following formal or non formal education. School enrollment is grouped to three categories, there are no schooling/never attended school, attending school, and not attending school anymore where no schooling/never attended school is the reference category. Health variable which is used is health status. Health status is grouped to health and sick. Children is sick if they have health complaints during the last month and disturbed their daily activities.
The key independent variable is parental migrant status. This variable is get from question about the existence of biological father and biological mother in the household. Parental migrant status is grouped to two categories, there are migrant and non migrant. If father and/or mother of children do international migration, it called migrant. Otherwise when father and mother of children doesn’t do international migration, it called non migrant. The reference category of this variable is non migrant.

Others independent variable are age, sex, residence and poverty status. Based on the school age, age is grouped to four categories, there are 5-6 years old (reference), 7-12 years old, 13-15 years old and 16-17 years old. Sex consist of male and female. Residence is consist of urban and rural. Poverty status is consist of poor and non poor.

2.3. Analyse Methods

The data in this study is analyzed using descriptive and logistic regression regression analysis, either binomial logistic regression or multinomial logistic regression. The descriptive analysis is used to know the characteristics of children. Binomial logistic regression analysis is used to analyse the education model, and multinomial logistic regression is used to analyse the health model.

There are three models in this research:

1. **Multinomial logistic regression model for education status**

The tendency of children not attending school anymore compared with no schooling/never attended school:

\[
\ln \left( \frac{\pi_1}{\pi_0} \right) = \beta_{10} + \beta_{11} MIGRANT + \beta_{12} AGE 1 \\
+ \beta_{13} AGE 2 + \beta_{14} AGE 3 + \beta_{15} SEX + \beta_{16} RES + \beta_{17} POV + \epsilon_i
\]

The tendency of children attending school compared with no schooling/never attended school:

\[
\ln \left( \frac{\pi_2}{\pi_0} \right) = \beta_{20} + \beta_{21} MIGRANT + \beta_{22} AGE 1 \\
+ \beta_{23} AGE 2 + \beta_{24} AGE 3 + \beta_{25} SEX + \beta_{26} RES + \beta_{27} POV + \epsilon_i
\]

2. **Binomial logistic regression model for health status**

The tendency of children to healthy with fell sick:

\[
\ln \left( \frac{p}{1-p} \right) = \beta_{30} + \beta_{31} MIGRANT + \beta_{32} AGE 1 \\
+ \beta_{33} AGE 2 + \beta_{34} AGE 3 + \beta_{35} SEX + \beta_{36} RES + \beta_{37} POV + \epsilon_i
\]
3. RESULTS AND DISCUSSION

Children welfare which is observed in this study are education and health. Descriptive analysis show that based on the categories of education, 86.41 percent children are attending school, 10.23 percent children are no schooling/never attended school and 3.36 percent children are not attending school anymore. Moreover, based on the categories of health, 15.84 percent children are sick and 84.16 percent are healthy. Based on the parental migrant status, percentage of children whom parent do international migration is only 1.78 percent.

Table 1 describes that children in Indonesia are dominated by children with non migrant parents (98.22 percent), 7-12 years old (47.75 percent), male (51.53 percent), live in rural area (51.26 percent) and non poor (87.19 percent). Table 1 also can describe the children education and health status by the independent variable. The descriptive analysis result of school enrollment of children in Indonesia by the independent variable are the percentage of children with migrant parent who are attending school (88.63 percent) is more than children with non migrant parent (86.37 percent). Otherwise, percentage of children with non migrant is more than children with migrant parent to be no schooling/never attended school (10.26 percent) and not attending school anymore (3.38 percent). Age group categories shows that children who are the most no schooling/never attended school is children 5-6 years old (59.67 percent). Children 5-6 years old in Indonesia usually have not attended school in formal education, because the most of them are attended in kindergarten. Children who are the most not attending school anymore is children 16-17 years old (17.35 percent), it because many children 16-17 years old don’t continue their education from junior high school to senior high school or from senior high school to university. Children who are the most attending school is children 7-12 years old (99.14 percent), most of them are in the elementary school. Furthermore if we analyze from sex of children, percentage of male (3.78 percent) is more than female (2.92 percent) to not attending school anymore while percentage of female is more than male to attending school although the differences is not significant. By residenze, percentage of children in rural area (3.73 percent) is more than children in urban area (2.99 percent) to not attending school anymore. By poverty status, percentage of poor children (5.28 percent) is more than non poor children (3.08 percent) to not attending school anymore, the opposite is percentage of non poor children (86.90 percent) is more than poor children (83.09 percent) to attending school. It because poor children have less opportunity to attending school than non poor children.

The cross tabulation result of children health status in Indonesia are children with non migrant parent (84.20 percent) is more than children with migrant parent (81.92 percent) to be healthy. Children 5-6 years old are the most children who fell sick (24.01 percent). There is no significant’s different by sex, if we analyze the children health status. By residenze, percentage of children in urban area (84.84 percent) is more than children in rural area (83.52 percent) to be healthy. It because the health facility in urban area is more than rural area, so the access of children in urban area to health facility is more than children in rural area. The interesting thing is percentage of poor children (85.07 percent) is more than non poor children (84.03 percent) to be healthy.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Education</th>
<th>Health</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Characteristics of Children Welfare (Education and Health) by Independent Variables
<table>
<thead>
<tr>
<th></th>
<th>No Schooling /Never Attended School</th>
<th>Not Attending School Anymore</th>
<th>Attending School</th>
<th>Sick</th>
<th>Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Parental Migrant Status</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>Migrant</td>
<td>8.62</td>
<td>2.75</td>
<td>88.63</td>
<td>18.08</td>
<td>81.92</td>
</tr>
<tr>
<td>Non migrant</td>
<td>10.26</td>
<td>3.38</td>
<td>86.37</td>
<td>15.80</td>
<td>84.20</td>
</tr>
<tr>
<td>Age group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-6 years old</td>
<td>59.67</td>
<td>20.21</td>
<td>40.12</td>
<td>24.01</td>
<td>75.99</td>
</tr>
<tr>
<td>7-12 years old</td>
<td>0.77</td>
<td>0.08</td>
<td>99.14</td>
<td>16.79</td>
<td>83.21</td>
</tr>
<tr>
<td>13-15 years old</td>
<td>0.47</td>
<td>4.30</td>
<td>95.24</td>
<td>11.33</td>
<td>88.67</td>
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<tr>
<td>16-17 years old</td>
<td>0.71</td>
<td>17.35</td>
<td>81.94</td>
<td>10.18</td>
<td>89.82</td>
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<tr>
<td>Sex</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>10.34</td>
<td>3.78</td>
<td>85.88</td>
<td>15.80</td>
<td>84.20</td>
</tr>
<tr>
<td>Female</td>
<td>10.11</td>
<td>2.92</td>
<td>86.97</td>
<td>15.88</td>
<td>84.12</td>
</tr>
<tr>
<td>Residence</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>10.36</td>
<td>2.99</td>
<td>86.65</td>
<td>15.16</td>
<td>84.84</td>
</tr>
<tr>
<td>Rural</td>
<td>10.10</td>
<td>3.73</td>
<td>86.18</td>
<td>16.48</td>
<td>83.52</td>
</tr>
<tr>
<td>Poverty Status</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>11.63</td>
<td>5.28</td>
<td>83.09</td>
<td>14.93</td>
<td>85.07</td>
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<tr>
<td>Non poor</td>
<td>10.02</td>
<td>3.08</td>
<td>86.90</td>
<td>15.97</td>
<td>84.03</td>
</tr>
<tr>
<td>Total</td>
<td>10.23</td>
<td>3.36</td>
<td>86.41</td>
<td>15.84</td>
<td>84.16</td>
</tr>
</tbody>
</table>

Source: Susenas Socio-Cultural and Educational Modules and Consumption/Expenditure Modules 2015, data processed

Model that is obtained from logistic regression analysis are:

1. Multinomial logistic regression model for education status

The tendency of children not attending school anymore compared with no schooling/never attended school:

$$\ln \left( \frac{\pi_1}{\pi_0} \right) = -6.592 + 0.094 \text{MIGRANT} + 8.930 \text{AGE 1} + 7.891 \text{AGE 2} + 4.212 \text{AGE 3} - 0.271 \text{SEX} - 0.042 \text{RES} + 0.257 \text{POV}$$

The tendency of children attending school compared with no schooling/never attended school:
2. Binomial logistic regression model for health status

The tendency of children to healthy with fell sick:

\[
\ln \left( \frac{\pi_2}{\pi_0} \right) = -0.275 + 0.118 \text{MIGRANT} + 4.560 \text{AGE 1} + 5.043 \text{AGE 2} + 4.621 \text{AGE 3} \\
- 0.123 \text{SEX} + 0.222 \text{RES} - 0.516 \text{POV}
\]

Table 2 shows the effect of independent variables on the children welfare. The result of multinomial logistic regression model for education is parental international migration doesn’t have statistically significant effect on education. In the model I, the other independent variables like age, sex and poverty status are statistically significant affect on children education. Children 7-12 years old are 67,491 times more likely to not attending school anymore, children 13-15 years old are 2672,419 times more likely to not attending school anymore and children 16-17 years old are 7554,442 times more likely to not attending school anymore compared to no schooling or never attended school. Male are 1,311 times more likely to not attending school anymore and poor children are 1,293 times more likely to not attending school anymore compared to no schooling or never attending school. In the model II, age, sex, residence and poverty status are statistically significant, like age, sex and poverty status are statistically significant affect on children education. Children 7-12 years old are 101,578 times more likely to attending school, children 13-15 years old are 154,862 times more likely to attending school and children 16-17 years old are 95,549 times more likely to attending school compared to no schooling or never attending school. Contrast with model I, male and poor children are less likely to attending school. Male are 0.885 times less likely to attending school and poor children are 0.597 times less likely to attending school compared to no schooling or never attending school. In this model, residence statistically significant affect on children education. Children who live in urban area are 1,248 times more likely to attending school.

<table>
<thead>
<tr>
<th>Covariate</th>
<th>Education (Not attending school anymore)</th>
<th>Education (Attending School)</th>
<th>Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1</td>
<td>Exp (B)</td>
<td>SE</td>
<td>Exp (B)</td>
</tr>
<tr>
<td>Model 2</td>
<td>Exp (B)</td>
<td>SE</td>
<td>Exp (B)</td>
</tr>
<tr>
<td>Model 3</td>
<td>Exp (B)</td>
<td>SE</td>
<td>Exp (B)</td>
</tr>
<tr>
<td>Covariate</td>
<td>Education (Not attending school anymore)</td>
<td>Education (Attending School)</td>
<td>Health</td>
</tr>
<tr>
<td>--------------------------</td>
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</tr>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
<td>Model 3</td>
</tr>
<tr>
<td></td>
<td>Exp (B)</td>
<td>SE</td>
<td>Exp (B)</td>
</tr>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
</tr>
<tr>
<td><strong>Constant</strong></td>
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<td>0,320</td>
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<td><strong>Migrant Status</strong></td>
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</tr>
<tr>
<td>Migrant</td>
<td>1,098</td>
<td>0,257</td>
<td>1,125</td>
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<td>Non migrant (ref)</td>
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<td></td>
</tr>
<tr>
<td><strong>Age group</strong></td>
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<td></td>
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<tr>
<td>5-6 years old (ref)</td>
<td></td>
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<tr>
<td>7-12 years old</td>
<td>67,491*</td>
<td>0,349</td>
<td>101,578*</td>
</tr>
<tr>
<td>13-15 years old</td>
<td>2672,419*</td>
<td>0,332</td>
<td>154,862*</td>
</tr>
<tr>
<td>16-17 years old</td>
<td>7554,442*</td>
<td>0,333</td>
<td>95,549*</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1,311*</td>
<td>0,061</td>
<td>0,885*</td>
</tr>
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<td>Female (ref)</td>
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<tr>
<td><strong>Residence</strong></td>
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</tr>
<tr>
<td>Urban</td>
<td>0,959</td>
<td>0,063</td>
<td>1,248*</td>
</tr>
<tr>
<td>Rural (ref)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Poverty Status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>1,293*</td>
<td>0,076</td>
<td>0,597*</td>
</tr>
<tr>
<td>Non poor (ref)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Susenas Socio-Cultural and Educational Modules and Consumption/Expenditure Modules 2015, data processed

* p < 0.01; ** p < 0.05; *** p < 0.1

Binomial logistic regression model for health status show that parental international migration...
negative statistically significant affect on children health. Children of migrant parent are 0.810 times less likely to be healthy compared to children with non migrant parent. The other variables which are statistically significant are age and poverty status. Every age category positive significant affect on children health which is more likely to be healthy compared to children 5-6 years old. Children 7-12 years old are 1.551 times more likely to be healthy, children 13-15 years old are 2.363 times more likely to be healthy and children 16-17 years old are 2.623 times more likely to be healthy compared to children 5-6 years old. In line with the descriptive analysis, poor children are 1.175 times more likely to be healthy. Overall, the result of logistic regression analysis is in line with the result of descriptive analysis.

4. CONCLUSION

International migration often do by Indonesian people for working abroad. International migration definitely have an impact, not only for them selves but also for family left behind. Generally, Indonesian migrant worker separate with their family in Indonesia, either spouse (husband or wife) or children. There are many study about the impact of international migration on welfare, for example the impact of international migration on household economics. But, only little study about the impact of international migration on children welfare especially in Indonesia. Therefore, this study aims to find out the impact of parental international migration on children welfare (education and health) in Indonesia.

The result shows that parental international migration have negative impact on children welfare, especially on children health. Children with migrant parent are less likely to be healthy compared to children with non migrant parent. This is not in line with study by Ming-Hsuan Lee (2011) which found that parental international migration doesn’t have a statistically significant effect on children health status, but might be explained by the unhealthy behaviour of the children left behind. Lee (2011) also found that parental international migration is statistically significant affect on children smoking habit. Moreover, Hildebrandt, et al (2005) found that parental migration made children with migrant parent less likely to receive some forms of health care. Furthermore, this study also shows that parental international migration doesn’t have significant effect on children education. This is not in line with the same study in China by Ming-Hsuan Lee (2011), which found that children with non migrant parents were better in education (school enrollment and years of schooling). This result might be explained because it has been implemented compulsory education program in Indonesia. Moreover, Indonesia government implemented a social security program on education in Indonesia. So, the school enrollment in Indonesia is already high. Parent’s role in the migrant household usually replaced with extended family. The extended family make children with migrant parent have more opportunities to still attending school compared to when the parent’s role replaced with others person. So, the parental international migration doesn’t have significant effect on children school enrollment.

This is a cross sectional study, which also have many shortage. It will be better if it use a longitudinal data in the future, so the study can described the changes of education and health of children, before and after their parent doing international migration. Moreover, the children
welfare that be observed in this study is only education and health. It will be better if the similar study can use the children welfare composit index that can describe the children welfare from five dimension constructed it, not only from education and health dimension.

5. ACKNOWLEDGEMENT

This study was presented at the Schoolar Summit organized by University of Indonesia on October 10-11 2017. Author would like to thank the following people for providing advice or information during the preparation of this study: the lecturer in Master Program of Population and Labour Economics, University of Indonesia (Miss Qisha Quarina, Ph.D) and classmates in Master Program of Population and Labour Economics, University of Indonesia (Syta, Nuri, Diyang, Dina R, Fitri, Alin). Author benefited from the comments and advised from participants at Schoolar Summit. Comments and feedback are welcomed at evayugiana@gmail.com.

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Social Control Toward Hate Crime in Balinese Community

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Iqrak Sulhin

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Abstract

Hate crime is a phenomenon which ever happen in Indonesia. It happened few times included violences toward Gafatar, assaults toward Ahmadiyah, the force dissolution of christmas ceremonial in Bandung, also the burning of the house of worship. As a country, which is known with its diversity and its principle Bhinneka Tunggal Ika, Indonesia require a proper model of social control to resolve hate crime. Hate crime has a destructive implications, because it has a different type with conventional crime, since the cause of hate crime may happened simply by prejudice. Based on Indonesian Ministry of Religion Affairs’s data, Bali Province is in second positon below East Nusa Tenggara Province regarding tolerance toward the diversity of religions, groups, and ethnics. Bali Province will be a pilot project for cases and conditions which have associated with a diverse society. This paper aims to explore and explain how Bali’s local community shape their own social control, also to explain how local poltics and policies have an impact to control society. The research finding indicates that power is decentered and dispersed throughout society. The dinamics of power is not only on the hand of State. Discourse, interpretation, social interaction, social bonding, local culture and structure are the concepts which strenghthen the explanation and analysis in this paper. The research method used in this paper is qualitative research method with in depth information. The result of this research is expected to enrich the study of social control and crime.

Key words: social control, hate crime, Bali, local politics, local community

1. INTRODUCTION

Indonesia is known as a country with a various cultures, ethnics, and religious beliefs. Bhinneka Tunggal Ika, which means “unity in diversity”, set as the slogan of the State, therefore Indonesia is build in the spirit of plurality. The Constitution of the Republic of Indonesia ensures every person in this country from different ethnic, culture, and religious belief to be able to coexist peacefully and respectfully. The unity will stand one’s ground if every component of nation want to unite themselves and take the responsibility to maintain of it (Suseno, 2008 : 30). The awareness of plurality must continually be an integral part of Indonesian social life. Few cases which threaten the spirit of plurality and unity have been occured in Indonesia, for example in 2013, there are assaults toward Ahmadiyah. Afterwards, the burning of the house of worship in 2015. In 2016, there are the violences toward Gafatar and they were rejected in the society. The force dissolution of christmas ceremonial occured in Bandung in 2016, and etc.
The definition of crime in perspective of criminology, is not merely an act which breaking the criminal law, but crime is a harmful act, break the moral sentiments in society, and it often occurs in society so that form the pattern. Therefore, crime is defined as a social phenomenon, and cases which related with religion belief, group, ethnicity, and race are classified as hate crime, which cause strong psychological and emotional impacts to the victims, and evoke the feeling of humiliation, isolation, and will hate their nature (Mustofa, 2006 : 207).

In the context of hate crime, strategy formulation of social control is necessary to be explored. Society has been increasing in complexity that cause the new and emerging form of crime. Therefore, the strategy of social control shall be developed and comprehensive in addressing the complexity of society, particularly in the context of hate crime. The patterns of social control include controlling amongst groups, group to members, individual to group, and amongst individuals, which are preventive, repressive, or preemptive type of control (Mustofa, 2010).

Based on Indonesian Ministry of Religion Affairs’s data and article (August 31, 2015), Bali is mentioned as the Province which is necessary to be emulated in term of tolerance. The issues about ethnic, religion belief, race, and amongst groups are nearly unheard, nevertheless those are ever happened for instance there is issue and miscommunication before Nyepi celebration, however it can be controlled and still rarely happen. The widespread violences of ethnic, religion belief, race, and amongst groups have made many parties worried toward Bali as a barometer of security in Indonesia will fall into the rivalry of interest in sociocultural area. The Bali Bombing tragedy as terrorism act is feared to be a momentum of the occurrence and outbreak of ethnic, religion belief, race, and amongst groups conflict and violence in Bali. Nevertheless, the tragedy that hurt the feelings of Balinese people and paralyze Bali’s economic activity can be addressed wisely, though the bombing tragedy happened twice in 2002 and 2005.

2. RESEARCH METHODOLOGY

This paper is a research concerning social control in Balinese community to resist hate crime. The qualitative approach is used in this paper which aim to search the comprehensive and profound information from informants. This research also attempt to find social aspects that are difficult to be discovered through numbers (Newman, 1979 : 329).

The capital of the Province of Bali, Denpasar is elected as the area of this research that has heterogeneous social life and one of the urban area in Bali which allow the researchers to observe and comprehend how to build and maintain the tolerance in the diversity. Furthermore, the researchers can figure out whether the local traditions and values still affect the urban area. This paper can be further developed in other regions such as Klungkung, Karangasem, Buleleng, Singaraja that largely homogenous. In consequences, it might be the antithesis to this paper.

3. ANALYSIS AND DISCUSSION (RESEARCH FINDINGS)

3.1 Social Control

The definition of social control according to Berger (in Sunarto, 2004 : 55) as “various means used by a society to bring recalcitrant members back into line”. According to Berger, the mechanism used to control are seduction, mock, humiliation, and isolation. Those mechanism is applied in a limited coverage such as in work, family, or friendship.
Furthermore, Berger explained that each individual is in the center of a set of concentric circles and each of it represents a system of social control, therefore each individual will experience that we are controlled by the system of social control which prevail in various groups (Sunarto, 2004).

Another definition of social control, according to Roucek is wider than Berger’s. Roucek explained social control is a term of collectivity that through processes, whether planned or not, where individuals are educated, persuaded, or coerced into conformity with habits and values of group. Roucek (in Sunarto, 2004 : 57) argued that social control can be classified into various ways. Social control may be obtained through institution but some are not. It may be obtained orally and symbolically; some are done through violence, punishment; some are using reward; and there are formal and informal form of social control.

Social control primarily aims to achieve conformity between stability and social changes or the system of social control aims to achieve peacefulness through conformity between certainty with justice or equality (Soekanto, 2010 : 181). As a strategy that aims to nurture the society, social control consists of the aspect of regulation, socialization of regulations, facilities, and application of sanctions as the final attempt. Regulation or law is a reflection of society morality, therefore what action is allowed or prohibited is a concept which applied in concerned society (Mustofa, 2010).

Furthermore, according to Soekanto (2010 : 183), the tools of social control can be classified at least in 5 (five) categories i.e:

a. Strengthen the belief of society member on the goodness of social norms.
b. Provide rewards to society member who adhere to social norms.
c. Develop a sense of shame in the souls of society members when they deviate from the prevailing social norms and values.
d. Evoke a fear.
e. Create a legal system, i.e a system of order with assertive sanctions for offenders.

This research finding about social control is refer to the perspective of Post-Structuralist Social Control rather than radical perspective which is assumed that social control merely in the hand of the State. Martin Innes in his article "Understanding Social Control: Deviance, Crime, and Social Order" (2003) discusses Marx's view of social control. For Marx, capitalists are inherently with conflict. Capitalists are assumed as an unstable order, consequently in the capitalist system of social control is imposed by the State, and contain the political economic interests. However, the post-structuralist perspective views that power is decentralized and dispersed in society. Post structuralist views power more like a multiple network, where center of power are distributed to strategic points throughout society. The state remains necessary in controlling and leading, but its role is transformed and there are also the other significant actors whose role needs to be acknowledged (Innes, 2003). Post structuralist views power more like a multiple network, where power centers are distributed to strategic points throughout society. The country is important in controlling and controlling, but its role is transformed and there are also other important actors whose role needs to be acknowledged (Innes, 2003).
The significant figure in post-structuralist theory with the concept of power is Michael Foucault. In his writings entitled "Society Must be Defended" (in Lubis, 2014), Foucault summarizes his idea of power: The significant figure in post-structuralist theory with the concept of power is Michael Foucault. In his writings entitled "Society Must be Defended" (in Lubis, 2014), Foucault summarizes his idea of power: (1) decentralizing the centralized powers, (2) studying the forms of power and its impact. Power is not merely assumed as commodity or domination between strong and weak, however power is actually dispersed in the network as well as the object of power. (3) Power is working from the bottom to top, begin from ideas, notions, the details on a small scale and then up to the stage of major decisions and actions. Furthermore, Foucault assumes that power is not a property but strategy. Where there are arrangements, rules, and regulatory systems, there is a strategy. Thus, power does not cover everything, but power is everywhere (Sutrisno & Putranto, 2005). The post-structuralist is also known for its views on the plurality of discourses. Discourse and power are closely related. Discourse is understood as the explanation, definition, thought, classification of people, knowledge, and system of thought which can not be separated from power relation. Discourse is the method of thinking, knowing, and expressing things. In other words, discourse has power as one of the factors that shape a man (Lubis, 2014).

3.2 Hate Crime

The main component to comprehend hate crime according to Gayllin (in Rajagukguk, 2014 : 5) is divided into 3 (three) matters, i.e :

1) Hatred is clearly and most obviously and emotion, an intense emotion, that is, a passion. To better understand hatred, it is helpful to have some sophisticated understanding of human emotions the irrational inderpinnings of human behavior and the darker side of human spirit.

2) Hatred is more than an emotion. It is also a psychological condition; a disorder of perception; a form of quasidelusional thinking. Therefore, to understand the condition of hatred, one must understand the nature of a delusion, a symptom of several mental desease. One must examine the meaning of paranoid shift that is central to the think of hating individual and a culture of hatred. This examination will lead us into the somewhat bizarre world of symptom formation.

3) Finally, hatred requires an attachment. Like love, it needs an object. The choice of an object—also like love—may be rational or irrational. Obsessive hatred is by definition irrational. The choice of the victim is more often dictated by the unconscious needs and the personal history of the hater than by the nature, or even the actions, of the hated.

The Federal Bureau of Investigation (FBI) defines hate crime as a criminal act which is conducted by offender toward person, thing, or object that partially or fully motivated by the prejudice of race, ethnicity, color, religion belief, and sexual orientation. Moreover, Jacob and Potter (in Simanjuntak, 2013) stated that hate crime is precisely a product of social construction which does not contain its own meaning. The difficulty to define hate crime
since it is related with the context of social norms, the sudden change toward law and implication of various matters such as politics, cultures, or the distinction of social levels.

The distinction between hate crime and the other type of crime is in the motive, the bias motive. Hate Crime Laws : A Practical Guide, The Organization for Security and Co-operation in Europe Office for Democratic Institutions and Human Right (in Simanjuntak, 2014 : 21) explains that the distinction of hate crime lies in the motive. There are several consideration that usually be the motive of the offender in choosing his victim, i.e : (1) the victim is considered has particular characteristic which is disliked by offender, (2) victim has protected characteristic which is owned merely by particular groups such as the equality of religion belief, language, ethnicity, or other similar factors.

McDevitt, Levin, and Bernet (in Rajagukguk, 2014 : 6) attempted to categorize the offender of hate crime into 4 (four) type of classes :

1) Merely look for sensation. It is generally done by juvenile who commit a crime to be accepted by their group. In this category, hatred is not deeply rooted. Its behavior can be controlled by strengthening social support eg through education.

2) Defend the territory. Offenders assume that the outsiders, imigrants, or intruders are not entitled to the equality of rights and way of life in their territory. Offenders do not incorporate to organized hatred groups, they solely ask assistance somewhat from them to execute their offense. The offenders usually have no criminal profile, nevertheless they sometimes “send a message” to the victims that they are not accepted.

3) Commit a holy mission. Offenders are totally committed with their prejudice and make it as a purpose to eradicate the target victims.

4) Revenge. In this category, the truth of an event is frequently irrelevant and the action of offenders is merely based on rumors.

Hate crime is also affected by social and political contexts, which construct the measure of hate crime, as it is stated by Carole Sheffield (in Perry, 2001 : 9), that:

“hate violence is motivated by social and political factors and is bolstered by believe system which (attempt to) legitimate such violence. It reveals that the personal is political; that such violence is not a series of isolated incidents but rather the consequence of a political culture which allocates rights, privileges, and prestige according to biological or social characteristics”.

3.3 Bali Community : Local Structure of Community, Local System, and Local Policies

3.3.1 Overview of Balinese Community

In the Balinese community organization, there are two forms of village and each has distinct functions and structures, i.e governmental village (desa dinas) and pakraman or traditional village (desa pakraman/desa adat). The governmental village is a government organization that arrange administrative functions such as identity card and
other matters related with government administration. Moreover, pakraman village is the institution that implement customary law, or commonly called Awig-Awig (Windia & Sudantra, 2006). The head of Governmental village is called Perbekel. The Governmental village and Pakraman or Traditional village has coordinate and consultative relationship.

Historically, pakraman village is a religious social organization of Balinese community. Pakraman village is convinced that has been existed around 9th – 14th A.D. It is recorded in the inscription of Trunyan village in 10th century (Parimarta, 1998 : 2). The philosophical foundation that inspirit life of Balinese community, known as Tri Hita Karana. Literally, it means “the three causes of happiness”, Tri (Three), Hita (Happiness), and Karana (Cause). In the belief of Balinese community, the prosperity of mankind will merely achieved with elements of Tri Hita Karana, i.e (1) harmonious relationship between man with God; (2) harmonious relationship between man with the universe, and (3) harmonious relationship amongst man (Windia & Sudantra, 2006).

The harmony is concretely interpreted as orderliness or Trepti, secure or Sukerta, and peacefulness or Sekala Niskala (Sudantra, 2001 : 2). Pakraman village has the authority and power to arrange its own household. According to Sudantra (1999 : 98), the autonomy of pakraman village are :

1) Pakraman village has authority to determine the rules of law for themselves.
2) Authority to arrange its own organization. Generally, the main activity of pakraman village is social religious activity. Social activity is related with the relationship amongst members in group or individual bonding. Moreover, religious matter is manifested in the enforcement of religious activity.
3) Pakraman village has power to resolve legal issues.

Traditional or Pakraman village has 2 (two) types of arrangement, i.e single and multilevel. The single arrangement of village means that Pakraman village do not consist of sub-groups, commonly known as Banjar. However, the multilevel arrangement of village means that Pakraman village consist of few groups or banjar.

The structure of Pakraman or Traditional villages may be different each other. It means, the name of position and number of personells may be different. The distinction of number of personells due to the requirement, for instance in wide areas require more personnel.

The government system of traditional village has 3 (three) variations, i.e :

1) Collective Governance System : there are some people at the top of the structure, and below the high position, there are some people too. Therefore, the decision is taken collectively.
2) Twin Governance System : There are 2 (two) officials at the highest position. In the village meeting, one of them sits on the right side, and the other sits on the left. The position is normative in the rule, who sits on the right and who is on the left.
3) Single Governance System: It means, there is merely one highest official. This system is like a modern organization. Generally, the urban areas such as Denpasar, apply a single governance system. However, collective and twin governance system are generally applied in areas that classified as Bali Aga, the villages which are not affected by the civil system of Majapahit Kingdom, since its location in the remote area.

Generally, the structure of Pakraman or Traditional village consist of Bendesa (as the highest position as the head of Pakraman village), Petajuh (Vice of Bendesa), Penyarikan (Secretary), Petengen (Treasurer). Under the authority of Pakraman village is known as Banjar. The head of Banjar is called Kelian adat. In Bali community, there is a traditional police, known as Pecalang. Pecalang is in the authority of Pakraman village and Banjar.

3.3.2 AWIG-AWIG: LOCAL POLITIC AND LAW

Awig-Awig is the fundamental standards of behavior of Baliness community, both written and unwritten, created by the community itself based on the sense of justice and appropriateness that lives in the community and according to the philosophy of Tri Hita Karana (Astiti, 2005). The establishment of Awig-Awig is similar with the formation of treaty and law. All members of village gathered and discuss in the meeting to establish Awig-Awig. Reflected from the model of the formation of Act or Law, which is affected by the thoughts of officials on the political structure, Awig-Awig is also affected by the thoughts of who on the structure. However, Awig-Awig is constantly created together in village meeting. Every banjar has an Awig-Awig, and it may be different each other. Banjar, under the authority of Pakraman or Traditional village has an autonomy to establish Awig-Awig for each Banjar’s territory.

3.3.3 THE SOCIAL CONTROL CONSTRUCTION IN BALINESS COMMUNITY (RESEARCH FINDING)

This research is also based on the constitutive theory, that human is actively responsible to shape the world together with others. Thus, human must be able to apply anything through discourse, language, and symbolic representation which is transformed for the purpose of formation itself. They identify the differences, construct the categories, and have contribution in a belief toward the reality that is constructed as order (Mustofa, 2010). According to Soekanto (2010 : 55), the social construction is done through a social interactions as the main requirement of social activities. Furthermore, Soekanto (2010) explains that social interaction is the dynamic social relationship which concerning the relationship amongst individual, groups of individual, as well as among individual and groups. Interaction becomes the entrance of the human formation of the reality. Basically, as the constitutive theory assured that society is provided the ability to transform and encounter the process of continuous formation, moreover be the part of it. According to constitutive theory, crime and its control shall be examined in the context of whole cultures.

In the context of the research of Balinese community, this constitutive theory factually occurs in the behavior and way of life of Balinese community. The role of local people is significant to create the orderliness. Synergy is the key to assist in an effective
and efficient model of social control. The synergy is built with the existence of social interactions that deliberately done to shape a pattern of discourse that can be accepted by the wider community. One of them is through the discussion of tolerance which is related to the image of Bali as one of the famous tourism areas in Asia and even the international world, about its diversity, cultural appeal and art. The discourse is continuously communicated either through oral discourse or written discourse. Furthermore, in the advancement of the times, something can be interpreted differently and will affect its reality, thus it needs to create discourse as the antithesis, eg with the application of peacemaking discourse either orally or written, such as the usage of “Ajeg Bali” slogan (peacefullness), “Menyama Braya” (means brotherhood) constantly.

In Balinese community, the application of discourse in the context of social control of crime does not focus on the conflict discourse, but on the discourse of peacemaking as a substitute to reality (crime). Moreover, Balinese community has strong social interactions between agents and structures and vice versa, thus shaping a community with the dynamics of power lying in its local system and structure which is appropriated with Post-Structuralist Social Control perspective.

Hate crime in awig-awig Bali is known as Wakparusiya. Wakparusiya means delivering harsh and hurtful words. The words are harsh in the context of their language structure or substance. The case was resolved through traditional rules first rather than the judicial system. Customary sanctions on Balinese community are known by several kinds. First, known as Poinget, which is a warning. Second, sanction in certain form of punishment which is appropriated with Hinduism. This particular punishment sanction is divided into 3 (three) types. The first is Jiwadanda, ie sanctions toward the soul, for instance by apologizing. Second, is Artadanda, a fine with money. Third, Sangaskaradanda is holding a ceremony. However, if hate crimes committed seriously in wide effect or it happened in different villages (there are distance between offender and victims) will be submitted to the court of justice.

4. CONCLUSION

The diversity that becomes the identity of this country, makes Indonesia has a variety of cultural characteristics and local genus. It can be used as an alternative to the social control model, where power can be decentralized to local systems and structures. Moreover, the unity of indigenous and traditional peoples and the culture of society has been formed first, thus something that is possible to be adopted or implemented, it can be the option that can be done.

REFERENCES


CHARACTERISTICS AND DETERMINANT OF DECENT WORK IN INDONESIA

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ABSTRACT

The phenomenon of "too poor to be unemployed" in Indonesia is supported by data showing that about 62 percent of the poor are labor. This indicates that there are some jobs that are not decent, which has not been able to improve the socio-economic status of their workers. Based on data available in Indonesian National Labor Force Survey 2016, decent work is a composite variable limited to six indicators, namely adequate earnings, decent hours, unacceptable work, stability and security of work, social security, and social dialogue. This study aims to investigate the characteristics of employability and know the determinants of decent work for employee and casual workers in Indonesia. By using descriptive analysis method, it is found that 74.3 percent of paid workers in Indonesia do not have decent work. Only 25.7 percent of paid workers in Indonesia who have a decent work. Analysis of the determinants of decent work through the logistic model showed that occupation and education level is a major determinant of decent work. Professional/skilled paid workers are more likely to have decent works than blue collar workers. Another important finding is that highly educated paid workers are more likely to have decent works than low educated paid workers.

Keywords: Decent Work; Job Feasibility; Casual Worker; Employee; Worker

1. INTRODUCTION

Indonesia's employment statistics data has only focused on the labor force participation rate and unemployment issues. This is definitely not enough. Labor force participation rates and unemployment have not been able to provide a real picture of the quality of life of labor force. The quality of labor is not only determined by the wages received, but also includes other aspects such as physical and mental quality, financial risk, social protection, and the recognition of human rights (Anker et al., 2003).

Work has two types of impacts on life. The general impact is good for health and wellbeing. Work is a means to gain wealth through better income, in addition to other benefits in the form of social identity that can support both physical and mental health (Waddell and Burton, 2006). On the other hand, work can also negatively impact health, especially for difficult working conditions, which impact on health spending caused by cumulative exposure to occupational risk (Debrand, 2011). Therefore, it takes a concept of work that is able to describe the quality of
worker life that not only considers material benefits but also takes other aspects humanely. Decent work is a concept of employment that describes the quality of workers in various aspects more comprehensively. Decent work is central to poverty alleviation efforts and is a means of achieving equitable, inclusive and sustainable development (International Labor Organization/ILO, 2012).

Increased labor productivity is an effort in alleviating poverty. The conditions of employment can be a factor driving and limiting the effort. Measurement of decent work will provide useful insights for policy makers to improve welfare and fight poverty.

Poverty is one of the main problems facing various countries in the world, including Indonesia. The number of poor people in Indonesia in September 2016 reached 27.76 million people, or about 10.70 percent. When compared with the number of poor people in March 2016, there was a decrease in the number of poor people by 0.25 million people within six months. Meanwhile, when compared to September 2015, the number of poor people decreased by 0.75 million people within a year (Statistics Indonesia, 2017).

Although the trend of poverty tends to decrease, the poverty rate in Indonesia is still relatively high. When viewed from the activities of the poor, the majority of Indonesia's poor are in fact working. Thus it can be concluded that the work can not provide the ability to increase socioeconomic status or regardless of poverty. So more specifically it can be said that the problems facing Indonesia are the welfare of the poor worker.

The analysis of determinants of decent work is important. In addition to improving the productivity of workers in order to promote economic growth, decent work can also encourage the improvement of the quality of life of workers in Indonesia, thus encouraging efforts to alleviate poverty. Differences in work feasibility conditions according to individual characteristics and job characteristics of workers may have policy implications in employment. This study aims to investigate the characteristics of employability and know the determinants of decent work, especially for employee and casual workers in Indonesia.

The results show that decent work for paid workers in Indonesia is still scarce. The occupation and level of education have the greatest influence in getting a decent work. The inequality of work feasibility is mainly due to differences in employment status and education level. The results of this study are expected to be used to help design adequate policies in encouraging and developing employment in Indonesia.

2. METHODS

Decent work is a composite variable measured from all the forming indicators. Ghai (2003), in his research on the difference in decent work in 22 countries incorporated in the OECD (Organization for Economic Co-operation and Development), made decent work across countries with the same weighting assumptions for all the decent work indicators used. Another study was conducted by Moussa (2017), who classified workers in Côte d'Ivoire into decent work and non-decent work and then analyzed the determinants of decent work through the logistic model.

Based on these studies, this study intends to measure the feasibility of work for paid workers in Indonesia by using decent work indicators. In addition, a determinant analysis was conducted to
examine the effect of demographic characteristics on decent work.

2.1. The Unit of Analysis and Data Sources

The dataset used in this study is a subset of Indonesian National Labor Force Survey 2016 undertaken by Statistics Indonesia. The survey collects national and provincial employment data covering 50,000 sample households. The analytical unit is a resident in a sample household aged over 10 years who worked or temporarily unemployed during the past week and is an employee, a casual worker in agriculture, or a non-agricultural casual worker. There are 36,339 units of analysis detailed demographic characteristics.

2.2. Measurement of Decent Work

The dependent variable in this study is the feasibility of work. This is a composite variable formed from several indicators. There are 11 statistical indicators that describe the characteristics of decent work, i.e., employment opportunities, unacceptable work, adequate earnings and productive work, decent hours, stability and security of work, combining work and family life, fair treatment in employment, safe work environment, social protection, social dialogue and workplace relations, and social economic context of decent work (Anker et al., 2003). Based on data limitations, the statistical indicators used to measure decent work at the individual level in this study are as follows:

1. Adequate earnings, the net earning received during the month from the main job in the form of money or goods. This variable is 1 if it is a feasible earning, and is 0 if it is low earning. The definition of low earning is if monthly earning is less than the regional minimum wage.

2. Decent hours, i.e. the number of hours worked on the main job for a week. This variable is 1 if it is a decent working hour, and is 0 if it is an excessive working hour. The definition of excessive working hours is if more than 40 hours per week.

3. Unacceptable work, i.e. hazardous child workers with the concept of 5-12 year old workers, or 13-14 year olds working more than 15 hours per week, or 15-17 year olds working more than 40 hours per week. This variable is 1 if it is not a hazardous child worker, and is 0 if it is a hazardous child worker. Due to limited data, the definition of child worker used in this study excluded under 10 years of age.

4. Stability and security of work, namely the existence of the agreement/work contract/decree on the main job. This variable is 1 if the worker is not at risk, and is 0 if it is a worker at risk. The definition of a worker at risk is a worker who has no permanent employment relationship, is employed where necessary, and is usually recruited or short-term contracts.

5. Social protection, namely the existence of social protection on the main job. This variable is 1 if it is a sheltered worker, and is 0 if it is an unprotected worker. The definition of sheltered workers is covered by one or more of the following social protection measures: health insurance, accident insurance, old-age benefits, pension insurance, death cover, annual leave/sickness/maternity leave, and severance pay.

6. Social dialogue, representation of workers and employers, i.e. membership in trade unions on the main job. This variable is 1 if a member of trade union, and is 0 if not a member of trade union. Membership in trade unions reflects the strength of social dialogue.

Based on the number of variable values on all indicators forming work feasibility variables. The assumptions used in this study are the same weight for all decent work indicators and decent
work classification if it covers more than 50 percent of the total value of all indicators. So that the dependent variable in this study is divided into two categories:

1. Decent work, if the number of composite variable values is 4, 5 or 6.
2. Non-decent work, if the number of composite variable value is 0, 1, 2 or 3.

2.3. Methods of Analysis

Methods of analysis used in this study is a descriptive analysis and inferential analysis. Descriptive analysis is used to provide an overview of work feasibility, either by decent work indicators or demographic characteristics. The description of the work feasibility is obtained through analysis of cross-tabulation results among variables in the form of percentage of each category.

Inferential analysis is used to see the effect of demographic characteristics on work feasibility. These demographic characteristics include individual characteristics and job characteristics. Individual characteristics consist of sex, education level, residence, and marital status. Job characteristics consist of business field, occupation, working period, and employment status. Inferential analysis method in this study using binary logistic regression model. This model is used because the work feasibility as a dependent variable is a categorical variable with two categories.

Binary logistic model obtained is as follows:

\[
\ln \left( \frac{p}{1-p} \right) = -8.98 + 0.38 \text{SEX} + 1.52 \text{EDUCATION1} \\
+ 2.40 \text{EDUCATION2} + 0.19 \text{RESIDENCE} + 1.01 \text{MARRIAGE} \\
+ 0.02 \text{BUSINESSFIELD1} - 0.49 \text{BUSINESSFIELD2} + 0.17 \text{OCCUPATION1} \\
+ 1.84 \text{OCCUPATION2} + 1.22 \text{WORKINGPERIOD} \\
+ 3.87 \text{EMPLOYMENTSTATE} + \epsilon_i
\]

3. RESULTS AND DISCUSSION

3.1. Characteristics of Decent Work in Indonesia

Almost 50 percent of workers in Indonesia are paid workers, with 38.7 percent working as employees and 10.5 percent as casual workers. Unfortunately, most paid workers in Indonesia do not have decent jobs, that is as much as 74.3 percent. In other words, paid workers who have decent jobs are only 25.7 percent. This condition is caused by many companies that have not fulfilled some decent work indicators.

Figure 1 illustrates the percentage of paid workers in Indonesia based on work feasibility and decent work indicators. Paid workers who have wages above the regional minimum wage have a higher percentage of getting decent work than paid workers with wages below the regional minimum wage. Paid workers who have less than 40 hours per week work hours have a higher percentage of getting a decent work than paid workers who have more than 40 hours of work per week. Paid workers who are not classified as hazardous child workers have a higher percentage of getting decent work than paid workers who are hazardous child workers. In addition, the
highest percentage of paid workers to obtain decent work are paid workers who are union members, have stable jobs, and sheltered workers.

Figure 1. Percentage of paid workers in Indonesia according to work feasibility and decent work indicators, 2016

<table>
<thead>
<tr>
<th>Indicators of Decent Work</th>
<th>Decent Work</th>
<th>Non-Decent Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Minimum Wage</td>
<td>56.0%</td>
<td>44.0%</td>
</tr>
<tr>
<td>&gt; Regional Minimum Wage</td>
<td>50.7%</td>
<td>49.3%</td>
</tr>
<tr>
<td>&gt; 40 hours per week</td>
<td>83.7%</td>
<td>16.3%</td>
</tr>
<tr>
<td>&lt;= 40 hours per week</td>
<td>58.4%</td>
<td>41.6%</td>
</tr>
<tr>
<td>Adequate Earning</td>
<td>70.2%</td>
<td>29.8%</td>
</tr>
<tr>
<td>Decent Hours</td>
<td>74.1%</td>
<td>25.9%</td>
</tr>
<tr>
<td>Unacceptable Work</td>
<td>66.3%</td>
<td>33.7%</td>
</tr>
<tr>
<td>Stability and Security of Work</td>
<td>85.1%</td>
<td>14.9%</td>
</tr>
<tr>
<td>Worker at Risk</td>
<td>51.0%</td>
<td>49.0%</td>
</tr>
<tr>
<td>Worker not at Risk</td>
<td>75.0%</td>
<td>25.0%</td>
</tr>
<tr>
<td>Social Protection</td>
<td>59.6%</td>
<td>40.4%</td>
</tr>
<tr>
<td>Social Dialogue</td>
<td>86.1%</td>
<td>13.9%</td>
</tr>
</tbody>
</table>

Source: Indonesian National Labor Force Survey 2016, data processed

Figure 2 illustrates the percentage of paid workers in Indonesia based on work feasibility and demographic characteristics. Female paid workers have a higher percentage of getting a decent work than male. Paid workers living in urban areas have a higher percentage of getting a decent work than rural paid workers. Married/ever married paid workers have a higher percentage of getting a decent work than unmarried or single paid workers. Paid workers with a working period of more than 1 year have a higher percentage to obtain decent work than paid workers with less than one year of working period. In addition, the highest percentage of paid workers to obtain decent work are highly educated workers, having professional/skilled worker, working in the service sector, and status as employees.

Figure 2. Percentage of paid workers in Indonesia according to work feasibility and demographic characteristics, 2016
3.2. Determinant of Decent Work in Indonesia

Determinant of decent work in this study is seen from the aspect of demographic characteristics of paid workers, both from the individual and job side. The results showed that individual characteristics and job characteristics significantly influence in determining work feasibility. The most influential individual characteristic of work feasibility is the level of education, where the higher the educational level of a paid worker is likely to get a more decent work. In addition, job characteristic that most affect work feasibility is the occupation, where professional/skilled paid workers and sales/business services/agricultural business paid workers will tend to find decent works compared to blue collar workers. This conclusion is obtained by looking at Wald's largest statistical value in that variable. Wald's statistical value for each variable is detailed in Table 1 below.

Source: Indonesian National Labor Force Survey 2016, data processed
Table 1. The Result of Binary Logistic Regression of The Demographic Characteristics Variable on Decent Work

<table>
<thead>
<tr>
<th>Variable/Category</th>
<th>β Coefficient</th>
<th>Wald Statistics</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-8.98***</td>
<td>1.491,52</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>0.38***</td>
<td>127,47</td>
<td>1.46</td>
</tr>
<tr>
<td>Female*</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Education Level</strong></td>
<td></td>
<td>1.189,62</td>
<td></td>
</tr>
<tr>
<td>Medium</td>
<td>1.52***</td>
<td>601,27</td>
<td>4.56</td>
</tr>
<tr>
<td>High</td>
<td>2.40***</td>
<td>1.141,59</td>
<td>11.06</td>
</tr>
<tr>
<td>Low*</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Residence</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>0.19***</td>
<td>32,89</td>
<td>1.20</td>
</tr>
<tr>
<td>Rural*</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>1.01***</td>
<td>653,03</td>
<td>2.74</td>
</tr>
<tr>
<td>Single*</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Business Field</strong></td>
<td></td>
<td>137,34</td>
<td></td>
</tr>
<tr>
<td>Manufacture</td>
<td>0.02</td>
<td>0.05</td>
<td>1.02</td>
</tr>
<tr>
<td>Service</td>
<td>-0.49***</td>
<td>50,85</td>
<td>0.61</td>
</tr>
<tr>
<td>Agriculture*</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Occupation</strong></td>
<td></td>
<td>1.848,92</td>
<td></td>
</tr>
<tr>
<td>Sales/Business services/Agricultural business</td>
<td>0.17***</td>
<td>9.28</td>
<td>1.18</td>
</tr>
<tr>
<td>Professional/skilled</td>
<td>1.84***</td>
<td>1.450,80</td>
<td>6.28</td>
</tr>
<tr>
<td>Blue collar*</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Working Period</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; 1 year</td>
<td>1.22***</td>
<td>393,87</td>
<td>3.39</td>
</tr>
<tr>
<td>&lt;= 1 year*</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Employment status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employee</td>
<td>3.87***</td>
<td>320,53</td>
<td>47.87</td>
</tr>
<tr>
<td>Casual worker*</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Indonesian National Labor Force Survey 2016, data processed

Description: *

*) Significant at α = 0.10

**) Significant at α = 0.05

***) Significant at α = 0.01

In general, all independent variables in this study have a significant effect on the feasibility of work. Significantly statistic shows there is a marked difference in the tendency to get decent works compared to non-decent work between groups in each characteristic. Other than that, the value of β coefficient is generally marked positive, meaning that the tendency to obtain decent
work for the group is greater than the reference group. Holding other characteristics are constant, any characteristics that may affect decent work for paid workers in Indonesia can be explained as follows:

1. Sex
Male paid workers are more likely to get decent works than female. The tendency of male paid workers to have decent work 1.46 times higher than female paid workers. This result is in line with Bahransyaf’s (1997), which states that there is a difference between female workers and male, especially in the wage system and social security that is usually for female workers is lower than male. This difference, according to Bahransyaf, is due to the fact that female have shortages of working hours due to menstruation leave and maternity leave, thus causing the income earned from the work to be different from male.

2. Education Level
According to educational background, paid workers are grouped into 3 types of low educated workers (maximum primary school completion), medium-educated workers (high school graduation), and highly educated workers (graduated college). High-educated workers have the highest tendency to have decent works, i.e. 11.06 times higher than low-educated workers. In addition, medium-educated workers have a tendency to have decent works 4.56 times higher than low-educated workers. The higher level of education is one indication of high productivity, thus providing greater opportunities for better wages and better job. The results is in line with Moussa (2017), who found that the higher the educational level of the worker would have a higher probability of having decent work compared with the lower educated workers.

3. Residence
Classification of residential areas of paid workers divided into urban and rural areas. The results show that residential areas affect the probability of getting a decent work significantly. Paid workers living in urban areas have a tendency to get decent works 1.20 times higher than paid workers living in rural areas. This may be due to the relatively low quality of human resources for paid workers in rural areas rather than in urban areas.

4. Marital Status
According to their marital status, paid workers are grouped into married/ever married workers and single workers. The probability of getting decent work for married/ever married workers is significantly different from single workers. The married/ever married workers have a tendency to have decent works 2.74 times higher than single workers. As explained by Purwaningsih, et al. (2006) that the average working hours per week for married workers is more longer than unmarried workers. In general, married workers (have spouses and children) have a greater responsibility so that they have to work harder to meet the needs of their families. This can lead to wage differences between groups of workers.

5. Business Field
In general, the business field for paid workers is classified into 3 groups: agriculture, manufacturing and services. The results of the study show varying factors for the probability of job feasibility for each group of business fields. Paid workers in the manufacturing sector have a tendency to have decent works 1.02 times higher than workers in the agricultural sector, but these results are not statistically significant. This means that the difference in the
The probability of decent work between paid workers in the manufacturing and agricultural sectors is not significantly different. In addition, paid workers in the service sector are significantly more likely to have decent work 0.61 times lower than those in the agricultural sector. This may be due to the transformation of employment that occurred in Indonesia not in accordance with the common. Todaro (1999) explains that the process of labor transformation that can increase economic growth generally occurs from the agricultural sector to the industrial sector, and then switch to the service sector. However, in Indonesia, there is an indication of direct employment transformation from the agricultural sector to the service sector. The shift of agricultural paid workers into the service sector is forced by the decrease in agricultural land and without the support of the ability to work in the service sector.

6. Occupation
Paid workers in this study are grouped into 3 types, namely professional/skilled workers, sales/business services/agricultural business workers, and blue collar workers. Professional/skilled workers have a tendency to get decent work 6.28 times higher than blue collar workers. In addition, sales/business services/agricultural business workers have a tendency to have decent work 1.18 times higher than the blue collar workers. Differences in the type of work can affect wages through risks and effort incurred by workers to perform certain jobs. High-risk jobs and high skill needs tend to generate high wages, and vice versa.

7. Working Period
The period of work is the length of time the worker to work in the main job. Working period can be a picture of work experience. The results showed that paid workers with a working period of more than 1 year have a tendency to have a decent work 3.39 times higher than paid workers with 1 year of service or less. A possible explanation for this finding is that working period has a direct relationship with job training and wages. That is, the longer the work, a worker will get more job training opportunities that can improve the quality of human resources, which then also impact on the achievement of a larger wage.

8. Employment status
According to their employment status, paid workers are divided into two groups: employees and casual workers. The results show that employees have a tendency to get decent work 47.87 times higher than casual workers. This is because employees are formal sector workers, while casual workers are workers in the informal sector. The formal sector is a business activity with an organized form, regular working order, financing from official sources, and employing workers with certain wage rates (Jayadinata, 1999). While the informal sector is characterized by its labor-intensive, familial, low formal education, small activity scale, no government protection, skill and skills are low, easy to enter, unstable, and low income levels (Hart, 1971).

The findings are based on several assumptions caused by some limitations of the study, i.e. the measurement of decent work variables performed is limited to micro indicators related to individuals and not yet include macro indicators such as employment opportunities. In addition, it also does not include indicators of a safe working environment due to data limitations. The feasibility classification used is still using the same weight assumption for each job feasibility indicator. Further research is needed to get a weighting of any decent work indicator.

### 4. CONCLUSION
The wellbeing of the population cannot be seen only from the labor force participation rate and the unemployment rate. Increased labor force participation rates and lower unemployment rates indicate that most of the labor force in Indonesia is working. If it is associated with a relatively high poverty rate in Indonesia, it can be said that there are still many workers in Indonesia who are not prosperous or called poor workers. For that, what is needed for workers is not just work but decent work, which is work that can improve the quality of its workers in order to improve socioeconomic status or regardless of poverty. Based on the phenomenon, this study aims to investigate the characteristics of employability and know the determinants of decent work for paid workers in Indonesia.

There are 11 statistical indicators established by the ILO to describe the characteristics of decent work, i.e. employment opportunities, unacceptable work, adequate earnings and productive work, decent hours, stability and security of work, combining work and family life, fair treatment in employment, safe work environment, social protection, social dialogue and workplace relations, and social economic context of decent work. Given the limitations in the available data, the statistical indicators used to measure individual feasibility work in this study are adequate earnings, decent hours, unacceptable work, stability and security of work, social protection, and social dialogue. Based on these indicators, a composite variable of work feasibility is established to describe the characteristics of decent work in Indonesia. Furthermore, the determinants of decent work are identified through the influence of individual characteristics and job characteristics on the feasibility of work.

The results show that decent work in Indonesia is still very rare. National Labor Force Survey data 2016 illustrates only 25.7 percent of Indonesian paid workers have decent works and there are still 74.3 percent of paid workers with non-decent works. Based on decent work indicators, the main characteristics for getting decent works are paid workers who are union members, have stable jobs, and sheltered workers. Meanwhile, when viewed from the demographic characteristics, the main characteristics to obtain decent work are high-educated paid workers, professional/skilled paid workers, working in the service sector, and status as employees.

A decent work determinant analysis shows that the individual characteristics (sex, education level, residence, marital status) and job characteristics (business field, occupation, working period, employment status) have a significant effect on work feasibility. Occupation and educational level of paid workers have the greatest influence in determining decent work. Professional/skilled and highly educated paid workers have the highest chance of getting a decent work compared to other paid workers. When viewed from the odds ratio of decent work, employment status and educational level became the largest differentiator between groups of paid workers to get decent work. Employees have a tendency to get decent works 47 times higher than casual workers, and highly educated workers have a tendency to get decent works 11 times higher than low-educated workers.

The results of descriptive and inferential analysis above provide an overview of work feasibility for paid workers in Indonesia. This can serve as basic information in establishing policies to foster and develop employment in Indonesia, especially in poverty alleviation to achieve equitable, inclusive and sustainable development. The main suggestion proposed based on the
analysis result is the improvement of education of paid workers in Indonesia so that they are able to work as professional/skilled workers in the formal sector.

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The study investigates the strategic role of Internet in supporting the fall of Soeharto’s New Order. It identifies some prominent factors and players initiating the presence of Internet which has provided a revolutionary effect. The Internet allows members of the public to share their critical views and opinions on important issues. One of the drivers of Internet creation is the heating of the Cold War. The inquiry opens by examining the recent Internet usage in global stage, followed by its history and closed by its role in assisting the demise of Soeharto’s regime. Soeharto wielded his power when Indonesia was in very bad condition both in terms of politics, security and economy. In the mid-60s, hostilities, opposition and inter-party violence surfaced and economic conditions led to the brink of collapse. Since the beginning of his reign, Soeharto realized that controlling information and limiting freedom of expression was an important way of creating and maintaining the stability of national security which was a necessary condition for successful national development for the welfare of the people. Internet had played an important role in disseminating information among activists to fight against the regime since 1995. Using the historical approach and library research for collecting data, the study concludes that Internet access had helped opposition groups to tame the tight control on information by the regime using it to sustain its political power.

Keywords: Internet, New Order, Soeharto

The Internet has become a very rapidly spreading global phenomenon. This is because of the amazing internet capabilities in communications and connections. The Internet is able to create, nourish and continue social relationships. Some of the advantages of the internet are e-mail, social networking tools and many other applications that citizens use to develop a wider social network and allow them to learn about those on social networks. The increasingly diverse social relations emerged because of the awareness of the need to use the internet. All of these trends will continue to strengthen in the next decade.

Axel Bruns, media and communications expert from Queensland University of Technology and lead editor of the Media and Culture Journal said that a number of real dangers of Internet usage still exist. The main thing is the misuse of social media to introduce populist and destructive agendas and ideologies; Increased commercialization of social media space by giant corporations; Exploitation of personal information into the public sphere by criminals and excessive law enforcement agencies.

Meanwhile, according to Andrew Nachison, founder, We Media, said that Google makes people well informed and and at the same time insane. Google has made us smarter, faster in choosing.
Children can search and discover knowledge in ways and scope that were previously impossible before its arrival.

The Emergence of the Internet

The presence of the Internet has provided a revolutionary effect. The Internet is very different from communication media such as radio, television, and printed publications based on one-way information. The Internet represents a great leap as an interactive medium. This is made possible by the advancement of Web 2.0 services, or intermediate platforms that provide facilities for information-sharing and collaboration activities in creating content. Internet users become active participants or play a double role as consumers and also producers of information subsequently.

The existence of Internet media that provides space for people to disseminate information and channel their expression becomes very important, especially in countries where there is no or little independent media. The Internet allows members of the public to share their critical views and opinions as well as obtain objective information. The presence of the Internet has provided space for members of the public to exchange information and ideas very quickly and cheaply across national geographic, political and sovereign boundaries.

Since its inception, the Internet is expected to be a major force in creating a world of democracy, freedom, equality, and peace by many. The Internet is expected to be a voice channel for the mute or very marginalized people, as their access to traditional media such as newspapers and magazines is very limited. Through the Internet the voices of the oppressed can be heard and the level of democracy of society will be uplifted. This makes possible because the Internet can be used by anyone, anywhere, at any time to channel their opinions. The Internet makes room for different dissemination of opinions much easier and more efficient. Scholars regard the Internet as a strategic instrument to encourage community participation and debate on many social issues. There are two important functions of the Internet, namely the channeling function (pipeline) and the leading function (frontier). Distribution function makes the Internet as a communication tool. While the leading functions provide space for people to spread opinions, critical and even contradictory statements on certain events.

Recognized in some cases especially in developing countries such as Indonesia (Soeharto's government) and Egypt (Hoesni Mubarak's government), the role of the Internet in bringing down authoritarian rule is very significant. However, the Internet was not able to realize the initial mission made 33 years ago, unlimited information sharing. The Internet has not been able to release the world from dictatorships and obstacles in disseminating critical and different information set by many countries such as North Korea, People of Republic of China, Russia and even where the Internet was born, the United States. The Internet has not been able to bring a democratic world, freedom, equality and peace. Even the Internet is now used by a group of people to commit criminal acts and terror messages such as those committed by ISIS, the terror group that the world is now fearing most. The Internet is also used by those who perpetrate moral destruction such as pornographic film producers and Pedophiles.
Many governments are closely monitoring the Internet. The case of Edward Snowdens, founder of WIKILEAKS, shows how the US government monitors every movement of everyone through a program called PRISM shaded by the Patriot Act. This program uses the Internet to collect personal information. Here it is seen that the Internet is used by governments to oversee community members. Obviously this activity is contradictory from the second function (frontier) of the Internet that gives people freedom and democracy. In some countries today, their governments prohibit the use of Facebook and YouTube. The country uses and controls the Internet as a national network to propagate government programs that seem to side with the people.

**History of the Internet**

One of the drivers of Internet creation is the heating of the Cold War. The US Defense Ministry was thinking of ways in which information can still be disseminated even in the event of a nuclear strike. This thought led to the formation of ARPANET (Advanced Research Projects Agency Network). This network then evolved into what we know today as the Internet. The main purpose of creating the Internet is sharing information.

January 1, 1983 is declared as the official birthday of the Internet. Before the birth of the Internet, various computer networks did not have a standard way to communicate with each other. A new communication protocol is created called Transfer Control Protocol / Internetwork Protocol (TCP / IP). This protocol enables a variety of different computers on different networks to communicate with each other. ARPANET and the US Defense Data Network officially switched to the TCP / IP standard, which also marked the birth of the Internet. Through the Internet, all networks can connect with universal language.

After the launch of Sputnik operated by its main enemy, America began seriously studying Science and Technology. Corporate bodies and governments allocated substantial funds for the purposes of development and research projects. The Federal Government established several agencies such as the National Aeronautics and Space Administration (NASA) and the Department of Defense's Advanced Research Projects Agency (ARPA) to develop space technologies such as rockets, weapons and computers.

Meanwhile, US scientists and military experts are very concerned about the Soviet invasion of US national phone system. With just one missile, it was enough that the Soviet Union destroyed the entire US telephone cable network that has enabled long distance communication to be possible. In 1962, a scientist from M.I.T. And ARPA named J.C.R. Licklider offered a solution to this problem. He named his findings "galactic network" (a "network of galaxies") computers that can communicate with each other. This network allowed government leaders to stay in touch even when the Soviet Union destroyed its telephone system.

In 1965, another M.I.T scientist developed a way of transmitting information from one computer to another that he called "packet switching". This package parses the data into a set of blocks, or packages, before sending them to the specified destination. In this way, each packet can route its route independently from one place to another. Without packet switching a government computer network - known as ARPAnet - would be vulnerable like a telephone system.
After going through several developments and experiments, in 1969, ARPAnet had 4 interconnected computers. The four computers are located in UCLA and Stanford research labs. The computer was as big a size of small house. This computer network continued to flourish in the 1970s including at the Hawaii University.

**New Order and Information**

Soeharto wielded his power when Indonesia was in very bad condition both in terms of politics, security and economy. In the mid-60s, hostilities, opposition and inter-party violence surfaced and economic conditions led to the brink of collapse. Armed with the SUPERSEMAR, Soeharto named his administration the New Order. The main agenda of Soeharto's New Order was to restore the purity of Pancasila and the 1945 Constitution, abolish communism, embrace liberalism, and restore the national economy. Strongly supported by the military, a small group of civil and economic technocrat graduated from the University of Berkeley, USA, the New Order was able to reduce high levels of poverty, improve the quality of education, and health standards.

Since the beginning of his reign, Soeharto realized that controlling information and limiting freedom of expression was an important way of creating and maintaining the stability of national security as a necessary condition for successful national development for the welfare of the people. Information control and restrictions on expression were made by monopolizing information channels, closing down communist mass media or media criticizing government policies, banning books and media censorship. Control and supervision of this information was conducted by the Information Department, the Attorney General and the National Censorship Agency, the Laws and the Government Regulations.

Soeharto's actions related to information control and the restriction of expression had begun since 1965. Soeharto removed the left-leaning media or supported the communists and Sukarno and revived the media prohibited or marginalized by Sukarno. Suharto's strong ability to control and access media made the New Order regime had lasted for more than three decades.

The New Order government believed that an important factor in determining Indonesia's success in overcoming many challenges was a safe and stable environment. During the Soeharto era, domestic stability was a top priority because Indonesia was overwhelmed by a very sharp class of opposition between communists, nationalists and Muslims. The New Order government applied a systematic formula: the government undertook economic development and gradually increased the prosperity of the people. As compensation, the government controlled politics strictly and had little tolerance of criticism or political opposition.

The New Order executed its ideas and political agendas to dominate through physical as well as non-physical violence. Book bans, censorship, revocation of publication permits, print and electronic mass media control, *telephone culture*, monopoly of data and information creation and dissemination, uniformity of opinion on an issue, monument construction is a series of non-physical forms of violence. All this was done by the New Order under the dominant leadership of Suharto with the aim of creating national security and stability, state unity, sustainability of national development and national identity.
Internet in the New Order

In Indonesia the first Internet connection was built in 1983 by Joseph Luhukay at the Department of Computer Science, University of Indonesia when building the first UUCP44 in the UI connected to UUNet in the United States. From this connection, Luhukay built UINET, a network within the campus. When UINET merged with UUNet, Indonesia became the first country in Asia to connect to the global Internet.

While the growth of the Internet in Indonesia was still through academic and research networks and also amateur radio activists, in the United States this technology began commercialized with the establishment of Commercial Internet Exchange in 1984. Internet Service Provider or better known by the abbreviation ISP, Compuserve, American Online and Prodigy started doing business that year. Following this trend, in Indonesia the commercial Internet was also beginning to emerge and was mostly driven by those sent by Habibie, Soeharto’s loyalist to study abroad in order to build a vision of high technology application in Indonesia.

In September 1994, PT Indo Internet (Indonet), the first commercial ISP was established in Jakarta by Sanjaya, an engineer working at IBM. The shareholders are PT. Telkom and Indosat and Soeharto’s Supersemar Foundation. With the support of large and influential agencies, and the absence of clear rules about ISP business, Indonet was easily licensed for operations. As the first businessman in the field of ISP, Indonet was able to master this field absolutely for the first two years. When the operating licenses for ISP business provision became easier to obtain in 1996-1997, ISP’s ISP market confinement faded.

Two years later, 1998, PT Telkom (PT Telekomunikasi Indonesia Tbk) helped enliven the ISP business by establishing Telkomnet. As the holder of the domestic telephone line monopoly, Telkomnet offered a wide range of telephone-based Internet services. This network-based service was able to attract existing ISP customers to switch to Telkomnet.

With the presence of commercial ISP services, the existence of the Internet began to some extent to give some benefits to the Indonesian people in 1995. The number of users was still limited to members of the community who have telephone connections, able to pay internet connection fees, and had personal computers. While the government's efforts to bridge these conditions had failed due to low telephone lines, unstable infrastructure supporting Internet connections and the onset of economic crisis.

The New Order government was just beginning to make a serious national agenda of building the Internet network in 1996. This national agenda was called the 21st Century Vision N21 or Vision of the Archipelago, pioneered by Jonathan Parapak, Director of Indosat. Vision N21 tried to follow the pattern of developing the national information infrastructure that was established by the United States. The program was expected to coordinate the activities of various Internet network developers and in the hope of getting a loan from the World Bank. However, the development agenda of the V21-based Internet network N21 met deadlocked and the World Bank’s loan was not obtained due to the economic crisis in 1997.
The role of the Internet in Access and Information Dissemination

In the midst of the failure of the New Order government to provide Internet services due to the economic crisis and the limited facilities and ownership of personal computers, the emergence of Internet kiosk (locally known Warnet) in 1996 was able to offer Internet services. Warnet offered a relatively low cost to the middle to lower class. In a short time the presence of Internet kiosk had become the main access for Internet users in Indonesia.

The role of Internet kiosks in the social dynamics of the Internet Indonesia became very important because it opened the space for the social and cultural interaction of most people. Warnet's presence has provided a solution for those who wanted to use the Internet but did not have telephone and personal computer at home and can not afford to pay the subscription fee. Internet kiosk had been able to become the center of utilization of information and communication technology for the lower middle class and become a gathering place. In Internet kiosk, users can talk about everything from food to the latest political issues without government control.

In principle, the presence of the Internet in Indonesia was without government intervention. This made Internet kiosk become the most democratic public space for most people. They can talk freely without any resistance or control from the government. As a democratic public space, Warnet had become a reliable access point where community members get information unhindered by time and place as well as surveillance. Warnet Cybercafe had become a medium for freedom of expression and opinion that was spread around the world about facts and different perspectives about the New Order government. While various forms of information contents which criticised government polices can easily be accessed.

Information Control by the New Order Government

The control of Information in the New Order era was conducted through three levels or phases: first was independent sensor by journalist and editor; Second through control by means of persuasion and warning; And the third through the threat of cancellation of publication licence and other licenses. The New Order government believed that the Indonesian press was a Pancasila press with its own 'responsible', obeying rules, following instructions, and participating in the ideology and interests of those in power. For more than three decades the Indonesian press had been used to cover information on scandals and mismanagement, hide facts, and ignore the harsh or distressing reality. News coverage hailed from the reality of what the authorities want. This made the newspaper was not news but the government's point of view. Consequently most societies can not distinguish between facts and fiction, truth and lies and national interests with the interests of the corrupt elite.

The role of the Internet in the New Order

Minister of Information Harmoko at the National Broadcasting Council meeting in July 1995 called for the use of the Internet in Indonesia to obtain only positive information and believed that Internet users had good moral and cultural endurance against its negative influence.
Meanwhile Secretary General of the Department of Tourism, Post and Telecommunications, Jonathan L. Parapak said that the government did not hesitate to take firm action against those who spread negative issues through the Internet.

Since 1995, the Internet had played an important role in disseminating information among activists and users of the Internet in Indonesia. Internet fever in Indonesia was generated by the presence of Apakabar, a mailing list managed by John McDougall, an activist from the United States. John A. McDougall established a research body that focused on data on current issues about Indonesia. During the 1990s, MacDougall held various internet conferences and newsgroups. Participants come for free. The goal was clear to give space for freedom of expression, opinion and dissemination of free information without fear. The true picture of the incident of attack on PDI headquarters on July 27, 1996 in detail can be read and viewed through Apakabar which was initiated by MacDougall.

Through Apakabar various views were disseminated, from the most radical to puritan, from pro-democracy activists to military apparatus. In addition to polemics of various opinions and views, Apakabar also disseminated information from the mass media, domestic and foreign, relating to the latest situation in Indonesia.

Apakabar success was then followed by the emergence of various Internet websites and mailing-list which were managed by activists in Indonesia. Ex-Tempo journalists manage Tempo Interaktif, followed by mailing lists such as SiaR, KDPnet, AJInews, X-post, Demidemocracy, Indo-News.com, etc. Information disseminated through the Internet can satisfy a thirst for information, material from the Internet was often downloaded and photocopied so that it can be read by those who did not have access to the Internet. In addition, the censorship of the Soeharto regime, by blackouting the pages of foreign newspapers or magazines that contain Indonesia, can not be applied to the Internet.

With the help of E-LAW U.S. Technology Circuit Riders, Legal Aid Institute, LBH became the best NGO in terms of its information and communication network. Network costs were borne by the sponsoring international organizations. LBH was able to spread information quickly to the world. This LBH network was used to assist communication between national and international opposition groups on political developments. LBH supporters in the United States sent an early version of PGP (Pretty Good Privacy) software encryption to Indonesia. The existence of this software helps LBH to send and receive information unnoticed by the government.

Meanwhile the Canadian International Development Agency (CIDA) assists the establishment of LBH-net, Wide Area Network using 'toolnet' software, 2,400bps modems. With this network, sensitive information about the political condition in Indonesia can be disseminated to all LBH branches in Indonesia and LBH colleagues abroad.

The most widely circulated material on the Internet is about Soeharto's wealth and the New Order regime's KKN practices, as well as discussions on democracy, human rights and spreading opposition ideas. In addition, through the Internet pro-democracy activists also share information and coordinate, such as determining the time and place of rallies. After the fall of the Soeharto regime, the profit-oriented online on-line media has mushroomed, such as detik.com, mandiri.com, satunet.com, berpolitik.com, astaga.com. Besides that most of the mainstream media, such as Kompas, Suara Pembaruan, Republika, Forum, etc., also have version-line.
A conversation over the Internet illustrating the disappointment of the New Order is shown in the emails below:

### INDONESIA-L
From: “wawan” <tedchok@yoga.wasantara.net.id>
To: “by way of trihar@ibm.net (AB Triharta)” <apakabar@clark.net>
Subject: Re: Usulan revolusi lagi
Date: Wed, 31 Jul 1996 23:14:04 +0700

> From: by way of trihar@ibm.net (AB Triharta) <apakabar@clark.net>
> To: tedchok@yoga.wasantara.net.id
> Subject: IN: Usulan revolusi lagi
> Date: Monday, July 29, 1996 3:54 PM


The content of the conversation was definitely not possible to be loaded by the mainstream media at the time because of its contents that directly attacked the New Order regime. Some former activists believed that the New Order regime had deceived students and consorted with the CIA to bring down Sukarno. A fact that is still debated to date.

In September 1996, Apakabar was closed down. RM. Roy Suryo, telematics expert was very complaining about it. However, conditions that hindered the dissemination of information among activists did not last long because a new bulletin was published by Kabar from PIJAR KdP@usa.net. The speed and effectiveness of KdPnet was similar to Apakabar's performance.
There were over 20 pro-democracy organizations in Indonesia until mid-1997 which had their own website. This ownership allowed them to connect electronically to one another and be able to communicate with international agencies such as the Global Democracy Network www.gdn.org. The network of pro-democracy actors had become a significant force against the mainstream media controlled by the New Order government. The network was an unstoppable force against the flow of information that is propagated for the sake of the government. This situation was in stark contrast in 1972-1994, when the government was still able to control the dissemination of information through print and electronic media through the threat of banning and controlling ownership of the press industry. The power of the government to oversee the press almost perfect because the information institutions such as the Ministry of Information, Indonesian Journalists Association and the Press Council were able to be controlled by the government.

**The Demise of the New Order**

The inability of the New Order regime to deter and limit the spreading space of virtual information whose contents unfolded bad practices of the regime had a significant impact on the widening of discordant and resistance to the government. Through the Internet the news and messages of resistance rapidly spread among young activists accessing the Internet. While on the side of the regime there were friction and more importantly the "watchdog" of information flow was not used to surfing the Internet either to control, restrict and limit and counter the message of activists attacking the government.

The adoption of the Internet as a means of struggle to subvert a 30-year regime in power was a collaboration with the international spectrum against the aging regime and its losing ground to control media content and the inability to read and hear its messages and facts. Unlike printed media and television and radio that can still be controlled, the Internet has become a wild arena that is difficult to be controlled by the New Order regime. Internet had become the fertile ground for opposition groups.

In the midst of friction, defection and internal treachery both from civilian sides led by Harmoko and from a military high ranking represented by Syarwah Hamid, the pressure against the New Order over the Internet known as cyberspace transformed into a real world when thousands of students flocked the DPR / MPR Building on May 18, 1998. This siege led to the resignation of Suharto as leader of the New Order regime on May 21, 1998. Suharto resigned as President of the Republic of Indonesia ten months after the fall of the rupiah against the US dollar triggered the economic crisis in Indonesia. With pragmatic and rational nature, investors both from home and abroad transfer their capital abroad. As a result the standard of living declined sharply and the unemployment rate increased dramatically. Millions of eyes of the people of Indonesia witnessed live broadcast from the Merdeka Palace Soeharo's resignation statement as President of RI. His resignation marked the end of the New Order regime and the beginning of a transition to democracy.

Admittedly, the Internet is not the only cause of the fall of the New Order regime. Very many forces were driving the collapse of this regime. Starting from the financial crisis, conspiracy theories and Suharto's wisdom to retreat colored the views of experts. But at least the Internet has a big hand as a means of resistance to spread facts, build opinions and provoke the masses,
especially students moving to end a ruling regime of more than 30 years in the name of stability and national development.

Conclusion

The New Order government acknowledged that the use of the Internet has made surveillance and censorship of dissemination of information contents especially against government policies very difficult. Attempting to prevent information harming the government by closing a website or newposting, is useless because others appeared in different locations with wider access. Thus it is clear that the Internet has been used as a powerful underground struggle tool by the opponents of the New Order regime. The website and Newposting managers were very easy to disseminate information that oppose or corner the government and also able to cover the source of funds to run their resistance operations.

Soeharto at his age faced resistance from all directions. Many of his loyalists both civilian and military had moved away from him or even turned against him. His supporters or his allies from abroad like the United States called for him to resign. At the same time the intensive use of Internet had dismantled his capabilities to tightly control the dissemination of information. The Jakarta Post newspaper in early June 1998 edition said that the Internet has replaced the spiky bamboo in the struggle for freedom in Indonesia.

References


Further Theorizing on the Concept of Regionness: 
The Role of Social Capital in Ensuring Regional Convergence 

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ABSTRACT 
This paper will discuss the possibility of strengthening the theory of regionness through the concept of social capital. The urgency for this topic arises from stagnating trend of regionalism project across the globe and the lack of discussions in the role of social aspect in regionalism. Based on Björn Hettne and Fredrik Söderbaum’s theory on regionness, it is said that the intensification of social interaction in grassroots level will pave a way for the creation of a new entity they called – ‘the regional state’. However, the theory’s fallacy came from its reliance on an assumption that social interaction will always lead to convergence. As has been proven by the case of Brexit, sometimes social interaction can also cause divergence and the collapse of the regionalism project itself. This paper argues that the concept of social capital can become an element that will complement this theory. It argues that social capital, which is an immaterial resources created through social interactions, will be able to increase the degree of regionness in one region. Furthermore, this paper will also open up a possibility to include sociology study, namely the theory of social understanding, in complementing the theory of regionness and social capital. This paper concludes that regionness is a social capital brought to the regional level as part of a joint effort to create a new governance system unimagined by any individuals alone. 

Keywords: regionness, regionalism, social capital, convergence, divergence. 

Introduction 
In early 90s, regionalism was nothing but mere buzzword uttered by hyperglobalists, such as Kenichi Ohmae, who glorifies it as the dawn of a new world order. At that time, globalization was among the most exaggerated discourse in intellectual debate upon which came the idea that nation-state as we know it is going to be finished. In his most famous book End of Nation-State, Ohmae (1995) argued that nation-state’s demarcation is no longer relevant in a globalized world which requires free movement of goods and persons in order to operate effectively. He instead favors a regionalized system in which economic activity is governed by a supranational body that he called ‘regional-state’. He then boldly predicted that the Westphalian nation-state system will find its demise and be replaced by a regionalized world order. 

However, twenty years after Ohmae’s prediction and nation-state is still strong as ever, if not stronger. Scholars like Francis Fukuyama (2004), who famously wrote about how the history
will end in an everlasting glory of global capitalism system, even changed his position when he wrote a book about “building nation-state.” As far as regionalism goes, European Union might be the closest to achieve Ohmae’s ideal but it is currently encountering strong backlash from the rise of ultranationalism movement among its members (Aishch, Pearce, & Rousseau, 2017). Meanwhile ASEAN, considered by many as the second strongest regionalism project after European Union, is still maintaining its non-interference principle that puts state’s sovereignty as the most importance (Corthay, 2016). Other regionalism project either fails miserably (African Union and SAARC) or ended with only regional free trade arrangement (NAFTA and Mercosur) (Kim, 2012). Across the globe, it is quite clear that regionalism process has stagnated and Westphalian nation-state system is far from its end.

The only silver-lining for regionalism is the fact that the study of this subject is ever-growing within epistemic community. Some of the most influential thinkers in this field, such as Peter Katzenstein, Amitav Acharya and Barry Buzan, shares Ohmae’s sentiment in that they believe the world is running on a straight trajectory toward a “world of regions” accelerated by an “inevitable march of globalization.” All those scholars have developed their own theory in regards to how we can reach that new world order, albeit no consensus has ever been made. The general lack of dialogue between regionalism specialists across the world is problematic, according to Fredrik Söderbaum (2013), as it is a sign of both weakness and fragmentation. Even more problematic is the fact that many scholars actually compete with each other in an effort to provide the ‘most convincing’ recommendation for policy makers. Such fragmentation between scholars can only be counter-productive and will not contribute to the state of stagnation in regionalism project across the globe.

Among all of academic works related to regionalism post-Cold War, one work that the authors believe stand out among other works is Björn Hettne and Fredrik Söderbaum’s journal titled “Theorizing the Rise of Regionness” (2000). In the time when regionalism scholars mostly refer to economic integration a la European Union to discuss their theory, Hettne and Söderbaum instead took their inspiration from social constructivism theory and developed a concept known as ‘regionness’. The word itself is defined by Hettne and Söderbaum as a degree of sense of belonging from the people to the region that they lived in – to put it simply, regionness is what nationness is to the building of a nation. Hettne and Söderbaum then argues that ‘regionness’ is the most essential variable to further regionalism and transform a nation-state into regional state.

What makes Hettne and Söderbaum’s theory on regionness special and deserved to be discussed further is the fact that they managed to argue the importance of social interaction in grassroots level which is often left behind by regionalism thinkers who are mostly dominated by political economy specialists (Söderbaum, 2013). This is especially true in the case of ASEAN Community project which constantly promotes Southeast Asia’s economic and political pillar but ignores the socio-cultural pillar altogether (Dilokwongpong, 2012). Borrowing Hettne and Söderbaum’s words (2000), this paper argues that social interaction between the people of a region is the most important factor in regionalism as it will serve as the glue that sustain the
regionalism process. However, this paper questions as to how we can engineer that social interaction to ensure regional convergence and prevent regional divergence as in the case of European Union after Brexit.\footnote{The European Union is currently under a threat of regional divergence. After UK’s EU Referendum on June 23\textsuperscript{rd}, 2016 which results in the decision to exit European Union (widely known as Brexit), the support for similar referendum across all European Countries is growing ever since. In response to this situation, Germany’s Economic Minister, Sigmar Gabriel, stated that the EU cannot let such referendum to be repeated or else it will spell doom for the largest civilization project of the 20\textsuperscript{th} century(Meredith, 2017).}

In order to promote the importance of socio-cultural pillar in the building of ASEAN Community, this paper will try to strengthen the theory of regionness by using the concept of social capital. The methodology used in this paper will be a literature review to find an intertextuality between the concept of regionness and social capital by focusing on the idea that social interaction is the most important aspect in ensuring regional convergence.

\textbf{The Genealogy of Regionalism Studies}

The conceptual and theoretical debates of region and regionalism are complex. The authors note that there has been no consensus in regards to the definition of regionalism. Before discussing the debate on regionalism, this paper should reach an understanding on the meaning of region. Region is a term similar to a nation-state, its differences include composition, capability, and aspirations. The conditions of region may appear to be formal or otherwise, created or recreated through the process of globalization (Hettne, 1999). Amin Maalouf claims that region is present as long as political actors desires it. In fact, region means the same as "identity" - its nature is not given, but is constructed and constantly changing (Fawcett 2004).

The crucial debate is the relation of regionalism and globalization. The two variables, in some debates are discussed as a two side of the same coin or mutually exclusive. The former discussion believes that regionalism is a part of globalization practice (stepping stone), while the latter believes that regionalism is a project that will hinder globalization (stumbling bloc) - due to the exclusion-nature of the region itself (Thompson, 1998).\footnote{Some experts believe that regionalism has a relationship with globalization. This is influenced by regionalism as the basis of the practice of the principle of liberalism. The capacity of the State is predicted to fade, followed by the principle of liberalism that has stretched the country's political-economic capacity (Gill, 1998). In politics, the state is no longer a single actor even though its existence remains an important unit in the global political economy (Gilpin & Gilpin, 2001).} The relation of both discussions is claimed by the existence of an integral part, in which globalization, as a concept, bounces one another (Held, et al., 1999). James Mittelman (1999) posited that the debate between regionalism would be compatible with globalization or vice versa - it appears that his theoretical debate is quite complex compared to his empirical experience.

Mittelman (1999) argues further that - if globalization is understood to mean the compression of the spatial and time aspects of social relations, then regionalism is only one component of globalization. Clearly, the dynamics of regionalism are the topic of globalization itself. So the debate of regionalism as a stepping bloc of globalization remains unclear (Hurrel, 1995, p.33).
For example, Margaret Lee, who observes relationships between regionalism and globalization, believes that the two does not coexist well. This is demonstrated through the African context, in which regionalism is proven to be counterproductive to Africa's economic growth and development agenda (Mittelman, 1999).

Regionalism studies invite a variety of perspectives to the analysis of region (Börzel & Risse, 2016). Broadly speaking, there are many different perspectives in analyzing how regionalism was created, i.e.; (1) geographical proximity (Hurrell, 1995), (2) the logical consequences of interdependence (Nye, 1965), (3) a certain degree of cultural homogeneity (Russet, 1967), (4) sense of interconnectedness within the scope of a common community (Hettne & Söderbaum, 2000). Meanwhile, the study of International Political Economy (IPE) views regionalism as synonymous with regional trade agreements (RTAs) which are part of a competitive scheme regulated by the WTO (Kim, et al., 2016).

Variations on the identification of regionalism are almost always based on political and economic orientation. This assumption is made after looking at some of the definition provided for the concept of regionalism. Anthony Payne (2003) defines regionalism as a state project designed to identify a particular region followed by economic and political orientation. Schmitt-Egner (2002) assumes the same - that the concept of regionalism concerns typology; the administrative region, the political domain, the economic realm, etc. There are also a huge number of regionalism interpretations based on geopolitical and geo-economic character. It can be said that most scholars view regionalism as a state-led phenomenon. The problem is that some states undergone regional cooperation will always have a competing vision on coexisting with each other (Söderbaum, 2003, pp. 8-9). The second wave of regionalism study, known as “New Regionalism,” believes that state-centric explanation is central to the “Old Regionalism Study.” As a contrast to the ‘old one’, the ‘new’ believes that regionalism is a multidimensional process involving many transnational actors and so it is impossible to explain this phenomenon solely on the basis of political elitism and economic matters alone (Hettne, 1999).¹

The other major debate worth seeing is the relations of state and regionalism. In some definitions, regionalism is seen as a continuation of the Westphalian state-system, where the sovereignty of the state remains the main object in the study of international relations (IR), and state becomes the domain in explaining the formation of regionalism. The tendency of the Westphalian system that took place in the European region resulted in a Eurocentrism bias in the current IR study (Kayaoglu, 2010). The bias is then influential in regionalism, because the experienceregional integration initially took place in Europe which is currently facilitated by the European Union.

The emergence of regionalism practices in recent decades has led to regionalism being mainstreamed in almost all global episodes. Regionalism, in some discussions, tends to be seen as a force which will diminish the role of the state. This is especially true in new regionalism theory that abandons state-centrism altogether, in favor of global social theory. The rise of regionalism then raises serious question to national identity. Is the meaning of identity, which is previously
coopted by the state, will be blurred in the face of regionalism? This key question is the driving force for this paper to look at patterns of identity through regionalism.

The ongoing globalization followed by regional activity indirectly opposes the concept of the sovereign state itself. There are three important assumptions as to how globalization defies the existence of the state through a model of regionalism, namely (1) state sovereignty, (2) citizenship, (3) geographical demarcation (Slocum & Langenhove, 2005). Björn Hettne (2000) has initiated a discussion on the meaning of citizenship in the specters of globalization that reduces the relevance of the nation-state. Furthermore, Hettne sees that the Westphalian system has been eroded by the phenomenon of globalization and lost some of its essential aspects. If the nation-state really loses its relevance, the consequence is that citizenship will disappear simultaneously.

Some literature on regionalism tends to neglect the role of identity in regionalization. This is caused by definition and conceptual building that sees regionalism only as a political-economic process organized by the state. Uniquely, amid increasing globalization trends and the complex interaction between actors, both state and non-state, socio-cultural terms are seldom to be discussed in regionalism studies. This cannot be right because socio-cultural entities are essential in the construction and reconstruction of regional integration. The regionalization process is initally occurring in society level until it is appropriated by the states and the creation of formal regional institutions latter (Slocum & Langenhove, 2005). Therefore, it is oxymoronic to discuss regionalism without first discussing the role of the people in regionalization process.

Rick Fawn (2009) considers regional studies in general only managed to touch the political and economic dimension, but have not been able to explain socio-cultural relevance. He believes that the identity of region, understood by observers of regionalism, remains an incomplete problem and should be studied further by IR scientists. Slocum and Langenhove (2005) question the existence of identity in regionalism, i.e., whether it exists naturally, or whether it is singular or plural, or whether the identity of regionalism can be created (Slocum & Langenhove, 2005).

The unification of the collective identity of regionalism is concerned by several traits, namely: (1) the complex-nature of identity makes it dependent on the individuals and the contexts that make it up; (2) the collective identity undergoing construction consequently depends on several actor, such as businesspeople (individual or institution); (3) depends on the tradition or collectivity received and legitimated through historical relation, (4) maintaining the closeness of the relation to the value system that continuously changes, both the agreed and rejected one, in intra-regional and international, (5) the region then consented on a collective recognition to see which is called intra-regions or vice versa, (6) finally, the creation of a central motive that allows individuals to recognize and articulate their attachments (Busekist, 2004, p.82).

Meanwhile, borrowing theorists of economic regionalism, as disclosed by Bela Balassa (2013), suggests that the integration phase of the region initially begins with general preferential tariff (GPT) until it ends with monetary union and the economic totality of the region. However, the thesis falls flat as the regionalism that took place in the EU actually experienced a new problem
in the form of currency confidence crisis (Eurozone crisis). Some regional economic scholars believe that economic integration indirectly provides opportunities for the presence of common identity - in the presence of single currency or single market.

The problem is, economic logic often clashes with the real social reality, where economic interaction is considered as a form of competition. Therefore, the sustainability of state-centric regional economic competition remains questionable as it is proven to be unable to unify the identity of a region. Other scholar, such as Joseph Stiglitz (2017) for example, believes that economic integration that takes place in the EU is nothing more than a political orientation rather than an economic orientation. In that case, the emergence of economic crisis in the EU is still likely to continue in the future.

Some of the problems above prove that identity construction in regionalism appears to be limited. Lately the world, especially the European, is being concerned by ‘deglobalization’ that triggers ‘deregionalization’. The real question arises on whether regional efforts have not been successful in bringing together collective identity? Or is the unification of identity still merely a cover of economic-political regionalism alone, whereas substantial things such as the meaning of identity among individuals in the region have not been considered at all?

**On the Theory of Regionness and Its Fallacy**

The theory of regionness belongs to the second wave of regionalism study called the ‘new regionalism’. This wave of thinkers see regionalism not simply as a formal organizations (as in the case of EU studies pre-Cold War), nor as a given, but as a part of construction and reconstruction process of global transformation. It is essential, for this wave of thinkers, to see regionalism as a multidimensional form of integration that embraces economic, political and socio-cultural aspects. Therefore, it is imperative to view regionalism beyond the creation of free trade agreements or security regimes. Most importantly, regionalism must also be seen as possessing strategic goal of region-building that includes establishing regional cohesion and identity (Farrell, 2005). In a sense, new regionalism theorists believe that regionalism is part of an effort to resist what Falk (1997) called as ‘globalizations from above’ by putting emphasis on initiative ‘from below’ to cope with global transformations in their own way.

The word ‘regionness’ was first coined by BjörnHettne (1993) in his journal titled “Pursuit of Regionness” as a counter for the growing mercantilist tendency in world politics. In that journal, He argues that Mercantilism, which he defined as a “pursuit of stateness,” is the source of the hierarchized nature of the world. Since every state pursues a realist desire to fulfill their interest first before others, strong states will always trample over the weak one. In his previous journal titled “Security and Peace in Post-Cold War Europe,” Hettne (1991) argues that mercantilist nature can also be seen in the process of European regionalism which led to the creation of a ‘Fortress Europe’, hell-bent on pursuing their region’s prosperity while ignoring the others. Hettne believes that such regional entity is no different than nation-state. He then urges for the creation of Gilpin’s ‘benign mercantilist system’ where protectionism is motivated by
“considerations of domestic welfare and internal political stability.” By pursuing that kind of mercantilist system, Hettne (1993) argues that we will no longer in a pursuit of stateness but a pursuit of regionness.

Hettne (1993) believes that the concept of regionness is essential in the creation of a neo-mercantilist system. While he acknowledges the diverse variants of mercantilism (capitalist, imperialist and Marxist), he argues that those variants are not significantly different from the original conception of mercantilism to warrant the epithet ‘neo’. Since the fundamental stance of mercantilism lies in its affinity to national power and particular political territory, the only way to broaden the concept is to put it at a higher level – that is, the regional level. Therefore, neo-mercantilist system should be understood as an economic system governed politically by an entity higher than nation-state. Because such entity does not exist yet, a pursuit of regionness became necessary in order to create it. What makes neo-mercantilism different from its original conception is that it transcend the nation-state logic in favor of a “segmented world system, consisting of self-sufficient blocs.” As such, neo-mercantilism became a transnational system where people are no longer constrained by closed national economies and able to integrate into a regional political organization capable of managing its own region problems and providing stability. Ultimately, he argues, that nation-states will be replaced by region-states which promotes benign mercantilism instead of the malevolent one.

The advent of region-state is not only beneficial for economic matters but also social. This line of argument was used by Hettne (2000) in his journal titled “The Fate of Citizenship in Post-Westphalia” in which he argues that regionalism can solve many social problems, including nation-state’s incapability in protecting their own citizens in a globalized world, by empowering transnational civil society. A regionalized world order, in his view, is not only a benign neo-mercantilist system but also a world that acknowledges the importance of human rights principle. This is possible because regionalism, as explained by new regionalism theorists, promotes multidimensional process of integration and put emphasis on the initiative ‘from below’ instead of ‘from above’. The only problem with Hettne’s arguments so far is that he still unable to define what he means by ‘regionness’. In “Pursuit of Regionness,” Hettne (1993) only explained the concept as an analogy of ‘nation-ness’ and ‘state-ness’ in that it implies a measurable degree of cohesiveness inside a region. It was not until his collaborative work with Fredrik Söderbaum that a comprehensive theory of regionness was made.

In “Theorizing the Rise of Regionness,” Hettne and Söderbaum (2000) assess that regionalism study has been focused too much on its ideological aspect as an urge for creating regionalist world order. This has caused regionalism study to neglect its empirical aspect as a “process that leads to patterns of cooperation, integration, complementarity and convergence within a particular cross-national geographical space.” Basically, Hettne and Söderbaum criticizes how scholars have been focusing too much on how to create successful regionalism project (usually represented by formal regional institutions) but forgetting the basic fundamental of regionalism in promoting social relations between people across national border. The difference in the two is that the first cares only about regionalism as perceived by the elite member of society while the
latter cares more about how society in grassroots level perceives regionalism. As a result, regionalism study is still unable to learn about how or why some regionalism is successful while others fail. This became the *raisons d'être* for the theorization of regionness.

The theory of regionness outlined by Hettne and Söderbaum (2000) departs from three metatheoretical points: (1) global social theory; (2) social constructivism; and (3) comparative regional studies. Global social theory requires scholars to abandon state-centrism as an ontology of their research. It is also required, for scholars, to go beyond “the mystifications of the concept of globalization,” to not take it for granted and to be able transcend the micro-macro relation in globalization. On the other hand, social constructivism provides scholars with rich conceptualization on the “interaction between material incentives, inter-subjective structures, and the identity and interest of the actors.” It emphasizes on how regions are socially constructed on how ideational forces were relevant in region-building. Finally, Hettne and Söderbaum took comparative regional studies with caution. They acknowledge area studies’ criticisms on comparative study which is said to ignore cultural relativism. Therefore, it is important to draw the middle-ground between “the devil of too detailed regional specialization and the deep blue sea of general theory.”

“Theorizing The Rise of Regionness” innovation lies not in its contribution for new definition of regionness (it does not provide new definition), but in its comprehensive theorization as to how the concept matters in regionalization process. First of all, by departing from global social theory, Hettne and Söderbaum (2000) were able to free themselves from the constraint of state-centrism in order to discuss regionalism as an independent phenomenon. As a result, they were able to see that regionalism is no mere aggregation of nation-states but a process in which “a geographical area is transformed from a passive object to an active subject capable of articulating the transnational interests of the emerging region.” The concept of regionness then became a guideline to find where does a regionalization process stand between ‘passive object’ and ‘active subject’. Secondly, by drawing from social constructivism, Hettne and Söderbaum were able to see regions as regions in the making, meaning that regions are always in a constant process of creating and recreating. Most importantly, a regionalization process is not exclusive to state, as in the case of China in 2000, in which Bangkok and Taiwan were part of East Asian regionalism but mainland China does not. This means that degree of regionness cannot be increased only by relying on state’s initiative, but every transnational actor within the making of region. It also means that region-state, the final product of regionalism, does not always equal to the combined territory of states within that region.

Hettne and Söderbaum’s theorization of regionness as a degree of regionalization process led to the creation of their now-famous “five phases of regionalism,” i.e., (1) regional space; (2) regional complex; (3) regional society; (4) regional community; (5) region-state. These five phases of regionalism were the most referred to by scholars who use new regionalism theory, such as Heinonen (2006), Riggiorozi (2011), Prieto (2012), Iinuma (2014), and even Bastari (2016). However, the problem is that most scholars use this five phases of regionalism as an evolutionary logic or stage theory, in which regionalism is seen as a natural process toward the
creation of a region-state, while Hettne and Söderbaum intended it only as a framework for comparative analysis (Hettne, 2003).

This kind of approach became problematic since it ignores the socially-constructed nature of regionalism which emphasize on the dynamics of social interaction and instead blindly assuming that increasing social interaction will eventually led to regional convergence. In actuality, social interaction does not always result into convergence but also a divergence (Hodges, 2014). The case of Brexit is a legitimate example to show how social interaction in regional level can lead to political identity which sows hatred within a regional community and put European Union under a threat of regional divergence. That case shows how regionalization is not a linear process but involves an ups and downs dynamic which requires immediate attention.

It is in the face of such phenomenon that we can see the fallacy of Hettne and Söderbaum’s theory of regionness which cannot explain how to ensure that social interaction in regional level will always lead to regional convergence. If Hettne’s argument about how regionalism will pave the way for the creation of cosmopolitan entity which favors benign mercantilism and the principle of human rights can be taken into account, then it is in our interest to see it through. From what the authors have seen from Hettne and Söderbaum’s explanation on the theory of regionness, it is quite clear that they are severely lacking in the understanding of how social interaction works. Therefore, it is quite worth it to delve into the realm of sociology studies to fill in this gap that Hettne and Söderbaum have left behind.

Social Capital as a Theoretical Complementary

The theory of social capital was rooted in sociological studies as a theory that explains the ‘missing link’ in economic analysis. The genesis of the theory came from the realization that Karl Marx’ conceptualization on ‘capital’ is still unfinished. This is due to his economic determinism framework that ignores any other aspect besides economy to produce capital. As a result, Marx cannot comprehend other method to seize the means of production other than the acquisition of material power through revolution (i.e., strikes and boycotts). In this regard, Aguilar & Sen (2009) argued that Marx has failed to explain how people could obtain noneconomic resources in their effort of class struggle.

The weakness of Marxian notion of capital was later covered by Pierre Bourdieu’s (1986) explanation on the various forms of capital, in which he defined capital as “accumulated labor … which when appropriated on a private, i.e. exclusive basis by agents or groups of agents, enables them to appropriate social energy in the form of reified or living labor.” Aguilar & Sen (2009) noted this definition as Bourdieu’s acknowledgement on the noneconomic form of capital, which can occur in the forms cultural and social capitals. While economic capital refers to material resources, such as monetary and physical resources, social capital refers to the immaterial power that one gains from their social networks and connections. Thus, came the popular notion that social capital is a “capital accumulated by individuals and groups through their social interactions that can be used to smooth cooperation among people and foster collective
action (Ferragina & Arrigoni, 2016).” “This popular nation of social capital is so pervasive, up to this day, that it became part of international development agenda, championed by the likes of World Bank, IMF and OECD.

If we were to guess as to why Hettne and Söderbaum never incorporated the concept of social capital in their theory of regionness, it is probably because of the relation between social capital and neoliberalism. Starting from Robert Putnam’s conceptualization on social capital in 1996, the concept became widely used by think-tanks, academics, journalists, politicians and policy-makers alike as an instrument to give meaning to, otherwise, banal discussions. In this regard, Law & Mooney (2006), argues that social capital has become a “conceptual deus ex machina,” a panacea to maladies, a solution to any kind of problems existing on this planet. The problem is, as noted by Smith and Kulynych (2002), talks about social capital as international development agenda will always be followed by an orthodox emphasis on ‘capital’. In other words, when people nowadays talk about social capital, they were actually talking about human capital, or labor, in regards to how it can contribute for further profit accumulation. It can be said that the concept of social capital has been appropriated by the logic of capitalism in order to make it convenient for neoliberal regime to incorporate social aspect of human life in their agenda or, as Lapavitsas (2013) put it, to ‘financialize’ it.

However, as noted by Ferragina & Arrigoni (2016), it is important to distinguish between social capital the theory and social capital the political discourse. While the political discourse of social capital nowadays is usurped by neoliberal-capitalism agenda, the theory of social capital itself goes way back to 1916 when Lyda Hanifan employed the concept to argue how a society can be maintained or destroyed by the degree of social capital that they have accumulated. The theory was later complemented by Bourdieu who explains social capital in its relation with how people can gain power through noneconomic means. According to Bourdieu, social capital is a resource that people compete with each other in order to leverage themselves in society. The immaterial form of social capital can be seen from the habitus in how people speaks, dresses or appears in public.

This is the second layer that made bourgeoisie so powerful, in that they possess social capital alongside economic capital. But if the social capital can be distributed evenly by forming an independent community through intense social interactions, then it is possible for every members of society to leverage themselves together and form a classless society, without employing extreme stratagem such as revolution (Águilar & Sen, 2009). It is in this Bourdieu’s concept of social capital, that this paper argues of its relevance in the theory of regionness, namely both concept seeks to empower people at the grassroots level to interact with each other in order to form a far better governance system than the currently existing one. The difference is that while Bourdieu only talks about social capital in the national level, Hettne & Söderbaum took it further to regional level. This means that the formation of social capital outlined by Bourdieu is very relevant to the concept of regionness.

However, we must also tread Bourdieu’s conception on social capital with caution as it is still not enough to explain how we can engineer degree of regionness in a way that it will always lead
to regional convergence. We get the idea that social capital put an emphasis on people’s own ability to gain power through institutionalized social relations, but we still don’t get how that intense social relation can actually happen. Therefore, it is imperative for this paper to delve into the realm of sociology study which is often neglected by IR scholars. In this regard, Hodges (2014) notes that one of the biggest fallacy in social psychology, and many disciplines influenced by it, is the assumption that people have “strong tendencies to conform, to imitate, to mimic and to obey.” He then argues that empirical study have proven that people’s interaction with each other is far more complex and dynamic.

According to Hodges (2014), divergence in social relations is as pervasive as convergence, but scholars mostly neglect that fact. He believes that this is happened because of the existence of theoretical and methodological bias called “Cartesian individuals” – a tendency for people to think of themselves as an isolated individuals who only cares about how they can achieve their egoistic goals. In Cartesian perspectives, others are only relevant insofar as they can help in contributing one’s determined goals, instead of a partner that we can work together with to achieve that same goal. Due to this bias, social thinkers are mostly blinded by the importance of people to work together in convergence, rather than a divergence, which is considered uninteresting, since it is seen as a natural consequence of their ‘misassumption’ on the isolated nature of human beings. But whether it is truly a natural consequence or not, it does not mean that scholars can simply abandon the discussion on divergence if it can actually be a fatal blowout to their theoretical proposition. In a way, we can argue that both Hettne & Söderbaum and Bourdieu are victims to this bias, which can be seen by their blind conviction that more social relations will always be equal to more regionness or more social capital.

Borrowing from Hodges’ (2014) word, this paper believes that social understanding, or regionalism, or accumulating social capital, is not about how we can make other to be more like ourselves or vice versa, but rather a joint process of exploring “a more comprehensive and complex field of action than any of its participants could have predicted or imagined alone.” The word “joint process” means that we must see regionalism as a collective project where every actor is seen as equal. Regionalism cannot be a project led by only nation-state or even grassroots community, it must be a project led by the combined effort of every actor existing in regionalization process. This is important, because the act of making others to mimic ourselves or force them to conform under a certain institution will only lead to divergence. If we take another look at the case of Brexit, one of the biggest reason for Britons to exit European Union is the fact that they can no longer tolerate EU’s principle of free movement (Ágopcsa, 2017). The top-down approach employed by European Union is basically an imposing manner in which every EU member is forced to obey a certain European characteristics envisioned by Brussels. If we use Hodges’ perspective on social understanding, it is no wonder that Britons chose to exit the EU, because their position are not even considered by the leading actor in regionalism.

Furthermore, the word “a more comprehensive field of action that no one could ever imagine alone” means that the end product of regionalism must be something far more sophisticated and far more imaginative than any governance practices that exist today. It also means that reaching
such end-goal will be impossible without the combined effort of every actor. Leaving the regionalization process to state will only lead to a continuation of Westphalian state-system while leaving it to a cosmopolitan scholar will only lead to an anarcho paradise without any semblance of order. The same is also true for socialist, Marxist, neoliberalist, institutionalist, nihilist, or any intellectual paradigm that exists in this world. No, regionalism cannot be only about one of those things, regionalism must always be about all of those things combined in order to create a governance system unimagined by any individuals alone. When we were able to do that, that is when we can truly see an increase in the degree of regionness.

**Conclusion and Reflection on Southeast Asian Regionalism**

The conclusion that can be made based on previous explanations is that theory of regionness cannot only discuss about how to increase social relations in regional level, but also in what manners the social interaction should occur. By taking the theory of social capital into account, this paper believes that social interaction must occur in a way that will liberate people at grassroots level from their class and empower them with the possession of social capital. Furthermore, the discussions on social interaction should also consider the possibility of divergence.

This is important because the difference between social interaction in national level and regional level is not only in terms of the number of people participating in it, but also in the increasingly diverse value, culture and perspectives that will clash with each other. It is much easier to create a convergence in national level because every participant (generally) has the same imagination on their identity. However, such collective imagination does not exist yet in regional level which makes political identity more likely. When people from different nations interact with each other, it is easier for them to find the reason as to why they are different than the reason to work together under the same identity.

Therefore, by incorporating the theory of social understanding, this paper believes that regionalization process must occur in a horizontal manner, in which every perspectives can be taken into account in the imaginative process of creating a regionalism. By using the conclusion of this paper, the authors believe that ASEAN, which has reached its 50th anniversary, must contemplate again as to why they choose to integrate. The historical trajectory of ASEAN which faces several dynamics has propelled them into thinking in only two situations, namely deepening and widening. Unfortunately, the regionalism process led by ASEAN so far has only managed to show its expansion in political and economic orientation.

Inward-looking interaction is necessary to understand how the role of transnational actors interaction matters, not only in creating the possibility for people to meet with each other, but in how they contribute in the constant process of construction and reconstruction in Southeast Asia. This is especially true for the continuation of ASEAN socio-cultural pillar (ASCC), which, in essence, is part of an effort to increase regionness among Southeast Asian people by forming a unity of identity. However, such ambition will be impossible if ASEAN continues to champion the importance of state-led regionalism without actually involving the people.
Currently existing imagined regional identity in the form of “ASEAN Way” principle, is nothing more than elitist rhetoric. This principle exists simply to legitimate ASEAN’s political economy agenda in their supposedly “open regionalism.” It appears that the principle is only relevant insofar as it continues to maintain the dominance of state in Southeast Asian regionalism. The question then became whether ASEAN regionalism only exists within the ten members’ foreign ministry or is it truly represents the Southeast Asian people’s idea of regionalism?

Without ever acknowledging the importance of the people, ASEAN regionalism is under a serious risk of divergence. This is where the conclusion of this paper can be taken into account. What ASEAN must realize is that region is always a region in the making. There is no steady conceptualization of Southeast Asian region as it is a concept that will constantly evolves along with the increasing degree of regionness in this region. Therefore, it is worth it to implement an effort based on the theory of regionness by emphasizing the importance of horizontal interaction within a region, in which every actor can be included in the process of imagining a region-state of Southeast Asia

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ABSTRACT

The role of women representatives in Indonesia’s political stage shows slow speed of change. The lack of significant progress of Election Constitution No 8 in 2012 about the 30% quota of women representatives in legislative has not shown significant progress. The representativeness hopefully brings the change for women issues in the state. But it is not happening even the quota has been reached. In Indonesia, the practice of women leadership and representativeness about their political role face serious stages. From the beginning of their live, women mostly face the condition of patriarchal and submissive action by their family and social environment. The inclusiveness of women in political should be the era of changing and the progressiveness of the area of domestic issue. This writing will analyze the fact and the phenomenon through the perspective of Islam. Islam is chosen because Indonesia is known as the biggest muslim population in the world and in Indonesia itself the majority group religion is in Islam. The thought of KH Husein Muhammad will take a major part of this writing about how he reinterpreted the meaning of women in Islam. The discourse about Islam and women will be broadly analyzed by also from social norms that become mainstream in Indonesia society.

This paper is written under the grand theme of gender-sensitive methods. The topic is taken under personal concern about the narrow-minded thinking about how Islam perspective is limited women in public areas. Which, in this issue is political role for women in Indonesia legislative level. The anatomy of the writing begins with the milestone of law in women rights in political area. Indonesia through the law No.68/1958 ratified the Convention on Political Rights of Women. In those law the elements of women rights are the implementation of non-discrimination, the guarantee of rights to choose and to be chosen, the guarantee of participation in policy making, the chance of role in government also in the socio-political organization. (Mulyono, 2010:1) By 1984 Indonesia also ratified the Convention on the Elimination of Discriminations Against Women through law No.7/1984. But the election result after two of ratification did not show any difference. Because the level of regulation only in the terms of law but not followed by any affirmative action by political party. In 2003 the law No.12/2003 article 65 clearly mentioned that women participation should achieve 30% from total candidate that the political party in the legislative.

The table below showed the result of election period by period. The increasing percentage of women in the election is determined by the revision of law No.12/2003 into law No.8/2012.

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Table 1: The Indonesian Election Sex Composition by Percentage

<table>
<thead>
<tr>
<th></th>
<th>Women</th>
<th>9%</th>
<th>11.8%</th>
<th>18%</th>
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<tbody>
<tr>
<td>Men</td>
<td>91%</td>
<td>88.2%</td>
<td>82%</td>
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The commitment of Indonesian government to increase the involvement of women in politics is also supported by President Decree No.9/2003 about Gender Mainstreaming. As we know the basic struggle of women outside their domestic area is recognition. By gender mainstreaming is expected to be more open and familiar with women role in the policy making process. The decree also strengthens with the Law of Equality and Gender Justice.

Quoting Baiq Wardhani on her paper titled, ‘Status Perempuan sebagai Warga Negara dalam Paradigma Inclusive Citizenship’ she stated that, “Political arena is witnessed the masculinization of role of the public. Political arena has witnessed the masculinization of role of the public. The tendency to give the public to men minimizing women’s space to express their ideas and engage as equal citizen.” Baiq Wardhani definition of how masculine arena political is similar and happened in Indonesia as well. That leads this writing into the citizenship and inclusiveness of women in political role as a base of theoretical framework of women discourse. The main argument is supported by not only the low number of representativeness of women in politics and in the issues discussed. “Actively involving women into the discourse of the state is a form of defeating the myth that women are irresponsible citizens. ‘Irresponsibility’ of women in a public space is the reversal effect of political exclusion of female’s voices under the regimentation of male-based polity.” She added that how the myth in the political arena that excludes women to her rightful rights. And by removing the perception that women are incapable of going into political arena is the thing that state should start to do. Because the challenge is not only putting women bodies into political arena but more than that it is also needing to be understood that the characteristics of masculinities should be eradicate. Thus, can minimize the masculinity inside the political arena and instead of that also embracing the male political representative to be more considerate toward women issue.

Citizenship and Inclusiveness of Women

As TH Marshall explained, the concept of citizenship and its rights is divided into three categories, 1) Civil 2) Political 3) Social. Civil is explained the components of individual freedom such as liberty, freedom of speech – thought – faith, the right to own property, and last is the right for justice. What he means by political is that every person should be having a right to participate in exercising political power. Specifically, to have a role in political authority bodies. In short, political means also the
power of body of government. For example, parliament and council of local government. It also means the political authority towards society. Social elements describe more than it takes. It relates to the welfare and security of people lives. The last one is social. By the standard that prevailing in the society people lives is set and define through educational system and social services.

Mirroring the definition by Marshall and according to the life of Indonesian women from way earlier until present day, we can conclude that women is facing crucial acknowledgement in political role. The term ‘ibu pertiwi’ or mother of Indonesia sounds glorifying in a beautiful way but not in practice. As a peace and harmonious image that women get from the term, rather than can handle it most women still face domesticated suffers than the way it is supposed to be. As a developing state, Indonesia is needs more work if it wants to increase the standard of welfare especially on women issue. For that it is not only the load of work of state itself, it is also the load of work by every Indonesia citizen to start thinking about eradicate poorness and let also women to take an account into politics.

Quantity vs Quality

It is hard to see that the privilege of women in parliament means that women issues should be fought better by its representative. In the gender perspective, the separation not only stops at women and men. But more than that, we have femininity and masculinity. And that both separations are not related into human body as we known as women and men. That is means that women could also be masculine and men could be feminine. Why it is important to understand? Because the law about the quota 30% of women in parliament only talks about the number of women bodies inside the formation. That is also been questioned for a long time, whether the quota of 30% is the right decision of making any difference in women issue. Hopefully by the changing in law of election in 2012 that women candidate should be put in the top position like men candidate so the probability of chosen is bigger than before.

As a legal citizen, women in Indonesia have the same right as men. But the inclusiveness is remaining low. The inclusivity of women should not be seen only by the number of representativeness but more than that women inclusivity must be seen in the terms of gender mainstreaming. So that not only women who talk about other women but men also should fight for the same. Ani Soetjipto in her writing stated that politic still a masculine arena. Means women in politics sometimes need to be masculine to be heard. In the same tone, Baiq Wardhani also stated that women inclusiveness in politics should be more than just a recognition by number.

In the PROPER (Parliamentary Reform and Public Engagement Revitalization) program made by UNDP Indonesia (United Nations Development Programme) with Sekretariat Jenderal Dewan Perwakilan Rakyat Indonesia reported that Pengarusutamaan Gender (Gender Mainstreaming) is important to be implemented in parliament. Thus women and men will talk in the same position and then the result of development can be felt by both women and men. (UNDP, N.d.:11) As a background, Gender Mainstreaming came first at 1995 in the United Nations Conference for Women in Beijing. The definition
of Gender Mainstreaming is putting gender sensitive in this case is women issue and women role in the every aspect of policy. At 2000, Indonesian government through Women Development documents specifically in Presidential Decree No.9/2000 stated that development should take an element of gender mainstreaming.

Social Perception of Women in Indonesia

Indonesia especially Java with the most populous moslem believer is one of good example of how women mostly treated in society. Macak (to maintain beauty), Manak (to bear a child), and Masak (to be staying in the kitchen) is three main duties of women believed in society. With those three main duties it is hard to understand that women would take a position in the society specifically in political role. Indonesian history mentioned that the rights of women to be included in voting is started at 1995. Before that as Simone de Beauvoir wrote, women is seen as a second sex. The individual who suits the role in lower class. It is clear for almost Indonesian that the position of women is hard to be recognized to be seen as equal as men.

Indonesian colonial era wrote different history with what Indonesian women in general seen now. Most of women national heroes is put in the strategic position with enormous responsibility. Tjut Nyak Dhien for example is one of women leader of army faced the colonials. Raden Ajeng Kartini with her position as a governor daughter promoted education under the pressure she took from her own family and under supervision of colonials. There are many Indonesian women heroes that showed the real meaning of equality that brought societies into better ones. As we can conclude that education taking a big role in creating the character and confidence of women. Because as Marshall theory of citizenship that education is leading to welfare. Means more educated people tend to have capability of themselves to be in better position in economic development. So that the gap in welfare can be reduced.

Women in Islam

الناس من وحبل الله من حبل (Habluminallah – Habluminannas) -- a covenant from Allah and a rope from the Muslims. is cited from Quran and suggesting that people should have good relations with its God (Allah SWT) and with other human. In general, I would argue that having a role in public means also for women based on this. Because with political power we can make a public policy, so we could participate in politic as our effort to make good relations with other human. ﴿يَا أَيُّهَا الْنَّاسُ إِنَّا خَلَقْنَاك مْ هَذِهِ الْأَيُّهَا الْيَأِّبَى ﴾ (Al Hujarat 13) In Islam there is a fiqh or can be addressed as the wisdom of Islam is fundamental values. On the Al Hujarat verse 13 means that ‘O mankind, indeed We have created you from male and female and made you peoples and tribes that you may know one another. Indeed, the most noble of you in the sight of Allah is the most righteous of you. Indeed, Allah is Knowing and Acquainted’. KH Husein Muhammad stated it is as a universal values in Islam that describing the creation of human (both men and women) in the earth. Beside that, specifically for women surah An Nisa (means women) verse 1, its stated
An Nisa verse 1: O mankind, fear your Lord, who created you from one soul and created from it its mate and dispersed from both of them many men and women. And fear Allah, through whom you ask one another, and the wombs. Indeed Allah is ever, over you, an Observer.

By the verse we understand that women have a same position as men too. Both men and women are having relations to the Allah in the same level and perspectives. Also both men and women have the same purpose to be created in this world. Another verse from At Taubah 71 stated that,

At Taubah 71: The believing men and believing women are allies of one another. They enjoin what is right and forbid what is wrong and establish prayer and give zakah and obey Allah and His Messenger. Those - Allah will have mercy upon them. Indeed, Allah is Exalted in Might and Wise.

So as it is stated all men and women are supposed to be an allies as they be a creation in earth. Means both men and women do work together as one in created a good deed in this world. Connecting it with the theme in public means it is also open for women as it for men. Because the responsibility to having better world for everyone is not only the job for the men but also the rights of women to take a part for it.

Islam and the State: Islamic Perspective

KH Husein Muhammad in Perempuan, Islam, dan Negara: Pergulatan Identitas dan Entitas starts his narrative by explaining the division of roles between religion and state. Diin (الدين) or religion as interpreted as faith is a belief owned and often used by mankind on the religious narratives. At the prophethood, when religion still stands as the guidance for the humble messengers, religion did not become the object to be argued over because the messages were still relevant to the conditions of the early society. However, current development turns religion to experience some distortions because of the emergence of various interpretations after the extremity of Prophet Muhammad's prophetic period. As the last ummah in the last prophetic era, as well as the existence of modernity rush, religion becomes unavoidable subject of debate. Particularly the war of interpretation which build up controversy in its ability to generate different impact among the people.
There are three tools of understanding used in modern Islamic political scholars, they are 1) integrality, is to make religion the foundation of the constitution, in this aspect religion is used as a theocracy view. 2) Mutualistic symbiosis, is the notion where religion and state turning into two mutually beneficial foundations. Citing Imam Al Ghazali, الدين والدولة توأمان which means both religion and state need each other. 3) Secularistic, which means religion and state are separated from each other (Muhammad, 2016, p. 99).

The three views on how the position of religion and state makes the study of religion and the state never runs out of debate. Though the state system that uses nationalism as its foundation is of course has different aspect from the past state. Therefore in understanding the political system it also experienced the adjusted adjustments. Without leaving out the human rights, religion then in its relation with the state is positioned differently. The argument built by the author by citing KH Husein Muhammad is how the main aspect should be justified. The aspect covers the three understandings: 1) Religion as an individual medium between believers and their God. 2) Religion is also interpreted as how individuals express obedience to their God. If both points above prioritize the quality of an intimate individual relation with his/her religion, then the third point is more general. 3) Religion also includes the setting of morality that governs how values such as equality, honesty, and justice are applied in the adherents life.

In addition to the three points above, KH Husein Muhammad also gives one more important point before stepping on the meaning of sharia. That is ‘mu’amalat’ –means social relations (معاملات) which as important to become the basis before explaining the meaning of the state separately. In interpreting mu’amalat religion is considered to also include social values as an obligation. Social in a sense of affairs beyond the individual relationship with God, humans also uphold the noble humanitarian attitudes. These aim to protect people from negative behaviour that could harm other human beings. Especially in terms of politics, people with certain power such as policy makers must have capabilities to treat human beings well.

The extraction of the four points above is drawn in a broader sense called sharia. Sharia is interpreted as sacred because its source is from the divine texts (Muhammad, 2016, p.101). Nevertheless it should be understood that shariah is not absolute but rather it follows the changes of the times. The nature of sharia is inclusive, dynamic, and contextual. The core of this thinking is often misinterpreted as the meaning of sharia. Supporting this statement, Dr. Khalid al Fahdawi enlightens in his book Al Fiqh as-Siyasi al Islami that there are some things that become the consensus context of moslem people that is the faith in God, angels, scriptures, messengers of God, doomsday and providence of destiny and moral principles. Additionally there is also (اتحاد) ijtihad (intellectual studies) which is based on the development and social interest by basing on the principles of sharia. Thus the possibility of a new interpretation is exist as long as it does not contradict the text of Sharia.
Conclusion

As a conclusion of this paper I conclude three main arguments about political role of women in Islam and Indonesian recent condition in social perspective and political environment. 1) The Constitution of Indonesia (Undang – Undang Dasar) 1945 as a basic all laws of Indonesia is granted the freedom of every mankind. As stated by Ulema KH Husein Muhammad, if the law is written based on the interest of all human deeds meaning that Islam is supporting it. As for women in political role, if the political role brings the deeds for mankind so it is also a necessary for women as a mankind to take a charge in that too. 2) As a perception of domestic Indonesian people about role of women in society, it is collective work for all Indonesian. To eradicate all kind of discrimination on women and see women as equal as men in terms of capabilities in social life. If the small-minded think how women tend to be more sensitive and men are more logical-rational still eligible, we will not move from the darkness era of no education in colonial era. Sensitivity itself is needed to form a great public policy. Because as a decision maker and as a human, the responsibility is same, to shape a better world for anyone. 3) In general, Islam with its populous believer in Indonesia depend on the perspective of its believer. Meaning if we have different kind of perspective because all Quran verses is written in languages that need to be interpreted with related sociological-cultural of when its delivered to Prophet Muhammad SAW. So basically, the reading of Quran needs open minded qualification and deep history understanding. And for sure second opinion is needed for further understanding. Citing only part of it without any considerations will consequently resulting into shallow meaning and wrong direction which is also my suggestion for readers out there. As a learner and scholar I personally still far from perfect understanding but I am trying to deliver what its need to be delivered in the name of better understanding about Islam. In the future I wish there will be more and more writers that support the spirit of spreading the understanding of Islam with its universal values and supporting women role in every aspect of life.

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UNDP Reports PROPER (Parliamentary Reform and Public Engagement Revitalization)

ABSTRACT

Like all beings, we have the intuition to naturally search for all things hidden. Since most of us are inclined to learn and hem in recognition through the power of visuals, subliminal messages and its sensitivity facilitates below the subconscious threshold. Typically embedded into a visual imagery, these elements are arranged in such a way that an image is perceived to have double images or meaning. It has yet to be proven that subliminal messaging can really impact a person without prior knowledge of the subject used for subliminal messaging. Even more so in a community where visuals are scrutinized and limitations are being set to protect from excessive influence from advertisements. In terms of measuring the effectiveness of advertisements, the four stages of AIDA model (Attention, Interest, Desire and Action) has been used in the past century. This study intends to investigate the effectiveness of subliminal messaging in advertisement using the AIDA model. Through a quantifiable method, survey questionnaires will be distributed to 250 students studying advertising in university level. The 5 point Likert scale will be valued in testing the AIDA model, which can lead to perceive the contribution of subliminal imagery in shaping better advertising visually.

1. INTRODUCTION

Advertising plays a significant role in the marketing industry due to its stimulating influence on purchasing behaviour of the consumers. Due to the increment of competition in the industry, advertising always be the first point of the marketing strategy as it may influence the sale and value of a firm. Statistics by the Statistics portal (2017) forecasted that the advertisement expenditure in 2017 is expected to exceed USD591 billion and it would further grow to USD724.1 billion by 2020. Therefore, it is crucial for the managers to make sure the advertising strategy is successful and place an understandable priority on determining the return for the advertising expenditures. With the emergence of tremendous competition, advertisers should explore ways to improve the effectiveness of their advertising. One way is to include subliminal elements in visual message.

Though it is almost unfeasible to measure the effect of the subconscious in a short period of time, the power of suggestiveness was seen when respondents were made to believe an idea in a recent study of preferences towards visual using subliminal imagery (Mohammad, Halil & Mohamed Rosli, 2017). Examining method of subliminal, it would appear that suggestive method is favoured with the understanding of underlying messages can be deciphered by most respondents when subjected to viewing the visuals of subliminal advertising. In receiving messages below the threshold, subliminal is defined as unconscious messaging as it is conveyed below the threshold of the conscious in the human mind. Many studies have shown that these types of embedding in visual imagery are able to alter a consumer’s
emotion, attitude and decisions in the perception of information delivered (Monahan, Murphy & Zajonc, 2000). Weinberger and Westen (2008) establish that this embedment increase one’s motivation and also helps to stimuli the process of information, thus the visual elements that are arranged within the subliminal message is important as it may enhance recall and attitude towards the advertisement (Mukherjee, 2002; Leong et al., 1996; Babin and Burns, 1997). There are few elements which can be applied in visual message or advertisement namely i) human interest; ii) body and facial gesture (emotion); iii) controversial/overly sexual images; iv) direct/straight-forward; v) metaphorical/symbolism; vi) shock images; and vii) text only. A study done by done by Mohamad, Halil & Mohamed Rosli (2017) found out that the most effective advertisement combination elements are 1) body gesture and metaphor 2) shock and overly sexual/controversial. Thus this study will adapt the same combination elements and added human element as another element for both subliminal advertisement messages. Past scholars (Kenneth E. Clow, 2006) stated that human interest is important element that can be compulsory to use in advertisement. This study is to investigate the effectiveness of advertisement with subliminal visual messages. The effectiveness of the elements will be tested by adopting AIDA (Attention, Interest, Desire and Action) model which was introduced by Lewis in 1900 as a basic framework in explaining persuasive communication (Wijaya, 2012). AIDA model has been widely used (Gharibi, Seyed Danesh & Shahrodi, 2012; Sanayei, Shahin & Amirosadt, 2013; Estévez & Fabrizio, 2014) in measuring the effectiveness of advertising.

1.1 Advertisement in the industry

At its simplest form, advertising is conveying messages to the attended audience. It is a form of communication from one party to the other. Whether it is passing on information, promotion, creating awareness or even educating, it is nonetheless an important tool to communicate. When used in sufficient and correct form, it becomes an effective tool establishing message to a consumer about a brand or an organization. Most of the time, advertising enhances market performance by providing useful information to consumers and by enabling promotion. Research shows that marketers spend money by the truckloads for advertisements and promotions where most of these go unseen and unheard. Malaysia Advertising Expenditure Report 2011 (Malaysia, 2011), reported that RM8.7 billion has been spent for advertising. It therefore gets attention for the brand, provides information about the brand, and sometimes, adds a little bit of entertainment in its message. In this case, focusing on the image that relates to the stimuli and influence towards the targeted audience or media audiences. It is designed to make an impression. It is harder to reach the customer effectively who is surrounded by data clutter nowadays. People ignore scary and shocking advertisements, they assume that it is not for them as they are not that bad (Arthur, 2004), so they did not take any notice. In most of these cases, imagery is chosen to create that deep impact. A single image has a sense of aesthetic that can be translated into a hundred different languages. It can cut boundaries and can be interpreted by anyone and everyone (Dondis, 1973).

Advertising is “a paid non-personal communication from an identified sponsor, using mass media to persuade or influence an audience” (Richards and Curran, 2002). Generally, the field of display advertising is divided into three main groups. The first group is composed of the advertising usually displayed on TV at the intervals between programs. The second group is called subliminal advertising (Alam and Khalifa, 2009). Although, the morality and effectiveness of this kind of advertising are questioned by many researchers (Klass, 1958; Theus, 1994; Trappey, 1996; Block and Vanden Bergh, 1985), it is vastly used in product advertisements for TV serials and movies (Tsai et al., 2007). This kind of advertisement is placed in a movie or TV show in such a way that the audience considers it as a part of scenario rather than an external element (Ye and Raaij, 1997) and convinced that, the use of a specific
product has led to the success of a movie character. It is reported that in this kind of advertisement, the defense mechanism of the body is weakened and the audience or consumer becomes more receptive to the advertising messages (Sharmistha and Braun, 2002). Therefore, it is considered as an influential advertising method (Janiszewski et al., 2003).

1.2 The Effect of Visuals in Advertisement

Effects formed by advertisement vary from attraction, interest or it can influence consumer’s behaviour. Advertising affects peoples’ daily lives, informing them about products and services and influencing their attitudes, beliefs, and ultimately, their decision regarding purchases of products or the preference of certain services or brands. Advertising affects the television programs people watch, the content of the newspapers they read, the politicians they elect, the medicines they take, and the toys their children play with. And one of the most influential factors in ensuring the effectiveness of such mediums is visual and its imagery in conveying the information and/or message. Distinctive feature of advertising, relative to other contemporary forms of human communication, is its reliance on pictures is made to persuade, influence the majority of targeted consumers. Moreover, documentary evidence suggests that, in print ads, the emphasis on pictures over words has steadily increased throughout the last century (Leiss, 1986). Visual imagery can create hard selling advertising as well as soft sell using subtlety. This is where the art of subliminal imagery comes in. Advertisers often use persuasive language very deliberately in order to get a positive response in the audience. If people feel that the product or service will benefit them, they are more likely to want to purchase it (Grundy, 2003). In most case, visual imageries are chosen to create a deeper impression or influence towards the audience or consumer. These visual can create hard selling advertising as well as soft sell using subtlety. This is where the art of subliminal imagery comes in. Advertisers often use persuasive language very deliberately in order to get a positive response in the audience. If people feel that the product or service will benefit them, they are more likely to want to purchase it (Grundy, 2003).

1.3 Subliminal Images in Advertising

Subliminal is receiving messages below the threshold of the subconscious (Garrett, 2004). Scholars in the study on subliminal message proved that this type of message may change a person’s emotion (Monahan, Murphy & Zajonc, 2000), change our attitude towards political and voting decisions (Hassin, Ferguson, Shidlovski , 2007; Weinberger & Westen, 2008), to increase one’s motivation and also helps the stimuli process of information (Bussche , Noortgate & Reynvoet, 2009). Subliminal messaging can be categorised into visual and auditory. In addition, subliminal can also be defined as situation or receiving messages whether text, audio or visual without conscious awareness (Smith and Rogers, 1994; Merikle, 2000, Garret, 2004) and it’s been used worldwide to embed subtle messages through the mind unconsciously. Subliminal advertisements are focused at a subconscious level where the consumer unable to estimate consciously what is happening to themselves however its impact can be seen through indirect ways as the impact on feelings, how cognitive aspect of a consumer is affected, whether consumers of such ads are able to evaluate the ads itself as well as how much thrill and involved they feel towards the characters depicted in such subliminal ads (Sofi & Nika, 2013).

Subliminal images are embedded in many ways, but there are two dominant methods that are commonly used. One is through the suggestive arrangement of the visual, while the other is embedding or stressing an object into another image or hidden image. This kind of embedding often uses sexual connotations since it is proven that one of the three things that are sensitive to the human brain are things associated with beginning of life, reproduction (or sex), and death (Key, 2009). As established in a recent study,
visual imagery that is embedded with sexual connotations are likely preferred and create attention in comparison to those that doesn’t have any element as such (Mohammad, Halil & Mohamed Rosli, 2017). That is, advertisers select pictorial elements from a palette; that specific elements can be linked to particular responses (Philips & McQuarrie, 2004). Subliminal factors can either be in its message or the visual image used. Visual images influence behaviour while also learning the manipulative power of the image. This includes contemporary advertising campaigns with visuals that prompt consumer behaviour as well as propaganda campaigns that lead to catastrophic consequences (Wilson, 1976). While Paul Messaris termed it as by virtue of their ability to simulate the appearance of the physical world, pictures can become surrogate objects of desire or emotions that ads subsequently associate with the subjects. By exploiting viewers’ assumptions of a direct, automatic connection between images and reality, images can become proof of advertising claims (Messaris, 1996). Subliminal advertising uses the subconscious to capture the subtle messages embedded within the imagery created (Pratkanis, 1992). And so far it has been proven that it can influence behaviour and attitude in the context of consumers who have efficient knowledge on the subjects and ideas that were conveyed through the visuals. The effectiveness of the advertisements in leading other actions is still a grey area to be studied upon.

With the visual imagery comes the visual element to be arranged within the preferred subliminal messaging. Since pictures in an advertisement enhance recall and attitude towards the ad, the visual element is an important component of advertisement (Mukherjee, 2002; Leong et al., 1996; Babin and Burns, 1997). In proving the effectiveness of the influence that hold over consumers from subliminal visual messages, authors like Dave Lakhani and Vallance Pakard in their books go deeper while saying that subliminal ads are used as a technique not only to increase sales but is also used to divert youth and involve them in such type of behaviour which is only hazardous to the consumer (Sofi & Nika, 2013).

1.3.1 Elements of Subliminal Visual Imagery

The elements are as important as the whole placement and layout of the visual itself as these are the components that make up the idea and meaning behind the visuals. In examining the preferred method as well as the best elements to be used within a subliminal imagery, it is suggested by Mohammad, Halil & Mohamed Rosli (2017) that a combination of different visual elements should be used to create a visual with impact. It is worth noting that most of advertisers tend to use human elements in the visuals with content analysis study by Cutler and Javalgi (1993) found that ads for services tend to use more people in their ads than ads for goods. A combination of both human element and shock may have a greater influence on the respondents subjected to study. Whereas shock images have been implemented since the early 1980s with the Benetton campaigns (Hubbard, 1993), but with its gruesome images, most tend to not associate with such tactics. Most rules and regulations of advertising tend to disavowed it too. On the other hand, elements of controversial and (or) overtly sexual images were the second in its effectiveness to be used in the visuals. Visual imagery that contains body gestures with a combination of metaphorical or symbolic idioms are considered effective in conveying messaging within an advertisement.

1.4 AIDA Model

Studies by Ahamy and Meimanad (2015) has been proved that by utilizing the AIDA model with the components of attracting attention, inducing interest, and tendency of customers the effectiveness of the advertisements can be measured. An advertisement should gain attention and interest, inform and/or persuade, and eventually lead to a purchase. It should gain attention in a productive way; otherwise it will not lead to buying action. An advertisement should also inform and/or persuade (William L. Wilkie and Paul W. Farris, 1975). Elmo Lewis developed AID (Attention, Interest, and Desire) as a sales guide
for salesperson to be successful in persuading the potential buyer to purchase. Later, AID became AIDA (Attention, Interest, Desire, and Action) when the action stage was considered essential to approach salesperson to encourage potential buyer through complete selling process.

AIDA (attention, interest, desire and action) is famous for the hierarchy model of advertising. This model has been used for all things and advertising medium. Since its introduction by Lewis (1900) and are generally due to the strong marketing and advertising literature (1925), the concept of a hierarchy of AIDA model effects has been used by many researchers, academics and practitioners. This model is used to measure the impact of advertising (Wijaya, 2012). AIDA is a fundamental strategy of the marketing and advertisement resulted from the perception of buyers, commonly used for assessing the effectiveness of advertising.

![Figure 1: The hierarchy of AIDA model in a funnel mode.](image)

AIDA proposes four general purposes; to draw attention, to generate interest, and motivate desire and force people to buy (Birch, 2010). The first level of the hierarchy is attention. Attention (Awareness) is distinguished to grab customer’s attention and lead them towards ad message. Prior to sell something, you must able to grab consumer’s attention. Mohamadian (2003) as cited in Ahmady & Meimanad (2015) view this stage as the first duty of advertisement and if an advertisement failed to fulfill this mission, it’s pointless. After the attention is created, a level of interest is induced. Interest generates customer interest to the purpose of the advertisements by highlighting advantages and benefits that offers a forceful selling point. Mohamadian (2003) as cited in Ahmady & Meimanad (2015) view this stage as more challenging compared with attracting attention. Thus, this should be carefully aligned with the purchasing behaviours and existing experience. Saedi (1997) as cited in Ahmady & Meimanad (2015) observed that the images and contents layout is very important in order to get viewer’s eyes follow them slowly throughout the advertisement and trigger their interest. In relation to creating interest, desire is then stimulated. In convincing and creating enthusiasm among target customers that the product or service will fulfill their needs, thus require them to act in a favourable manner. Ahmady & Meimanad (2015) suggested in order do this correctly, “the advertiser should communicate with the viewer to find out how he target customers think about the advertisement. Also, advertiser must be clear on how to persuade potential buyers to believe that the said product able to satisfy consumers’ both needs and wants. Once the desire is established, it diverts towards implementation of action. This turns customer’s desire into action (inquiry or purchase) towards the intended product is the last task of advertisement and definitely is not an easy one. Advertiser must be able to give consumers reassurance that their decision to buy the product was
correct and also the consumers should be able use words from the advertising content when they talking with others about the product (Bendixen, 1993). The AIDA model explained that for an advertisement to be considered as effective, it should be able to lead consumers starts from the first step up to the fourth one (Abdollahi et al., 2011); with all the steps being equally important (Karlsson, 2007). Yu (2012) opined AIDA is frequently applied model in gauging the advertisements effectiveness, “suggesting that advertisements must first attract attention, create interest, and stimulate desire before finally inducing action in consumers”. Thus, it is also called the hierarchy-of-effects model. Therefore, AIDA model is found to be relevant to incorporate into this research.

1.5 AIDA in Determining Advertising Effectiveness

Measuring and understanding effectiveness of advertisement is essential in today’s highly dynamic business world as it’s involved a huge amount of fund Maheshwari et al., (2015). On the other hand, advertising effectiveness refers to develop a tangible contribution to a particular organization which the output must exceed its cost to be considered fruitful (Wells, 2014). We are living in a benefit-cost world. Obviously each advertising institution’s goal is to attract customers. In order to attract customers, an advertisement must be effective. Thus, the process is incomplete without assessing the effectiveness of the advertisement. There seem to lack other alternatives available to identify the performance, reach, and the success of the advertisement. In order to determine the return on investment of the advertisement, one should know how effectively advertisement grab and hold audience attention and engage viewers (De Ros, 2008). Hall et al., (2001) observed one of the most challenging issues faced by advertising institutions remains the issue of judging the advertisement effectiveness. In continuing to seek the effectiveness of advertisements, Poonia (2010) addressed only about 50% of all commercials managed to trigger positive resonance on consumers’ purchasing behaviour when determining its effectiveness. Moreover, according to Ahmady and Meimanad (2015), nowadays, most of the organizations are actually aware on the importance of advertisement as an effective strategy to disseminate information regarding the product/services of the organization. However, the effectiveness of advertisement within the context of strategizing and catering its messaging is still vague and fragile. Even research done by (Tariq et al., 2014) found that brand loyalty and perceive quality towards company can be achieved by the effective advertisement but there are still a higher number of unsuccessful advertisements in comparison to the ones that are successful (Ahmady & Meimanad, 2015).

To illustrate the effectiveness of advertising on consumer behavior, models have been proposed that AIDA hierarchical model is understood and referred to the most. In AIDA model, the effect of advertisement on consumer behavior, as drawing attraction, creating interest, stimulate desire, and action are as the incentive direct the costumer from the first level to the last level (Khazaee, 2015). AIDA is one of the widely used hierarchy model as an instrument in planning advertising campaigns and evaluating their effectiveness (Corvi & Bonera, 2010).

Maheshwari et al., (2015) observed measuring advertisement effectiveness and identifying its elements as a new area of interest among variety of researchers. Ranjbarian et al., (2011) incorporated AIDA to measure the effectiveness of electric conservation on the TV advertisements. The study revealed that the electric conservation on TV advertisements were effective and successful in retaining audience’s attention, building interest and desire for action. In another study, Ranjbarian et al., (2011) used AIDA to analyse the relationships between advertising effectiveness and brand equity dimensions. The findings shows brand equity has a positive effect on advertising effectiveness. In connecting the importance of using the AIDA model in discovering the effectiveness of advertisement, a study by Yu (2012) used the AIDA
model shows that Art Nouveau kind of printed advertisements, integrated with fashion photography and digital illustrations, is exceptionally effective in grabbing the attention of consumers, triggering their interest, and exciting their desires. In addition, Omar & Yee (2017) conducted a study to investigate the effectiveness of hidden messages in commercial advertisements towards viewers’ purchasing behaviour based on AIDA model. The result shows that several aspects of the competitive hidden messages did influence viewer’s perception towards the commercial advertisement as well as viewer’s perception towards the product and the brand itself. All these studies can ratify that the AIDA model is an effective instrument used to measure the effectiveness of advertisements and this in turn relates to the use of AIDA model within this study. In endorsing its eligibility, Ahmady & Meimanad (2015) studied the effectiveness of Maskan Bank’s advertisements based on AIDA model and the result indicated the advertisements were effective on attracting attention, inducing interest, and desire of customers as well as Gharibi et al. (2012) that used AIDA to explain the effectiveness of advertising in private insurance organizations in Tehran. The findings revealed the insurance company advertising has been effective in grabbing people attention.

2. METHOD

The purpose of this research is to investigate the effectiveness of subliminal visual messages in advertisements. The chosen strategy of inquiry for this research is the quantitative method that utilizes survey questionnaires. The quantitative method according to Keyton (2006) is a method in which researchers use measurement and observation to represent phenomena in amounts, frequencies, degrees, values or intensity. The two different types of subliminal advertisement that represent the combination of different advertisement elements in each advertisement will be analyzed to identify respondents preference on the subliminal advertisements provided. In reference, the AIDA model (attention, intention, desire and action) will then be used in order to determine the effectiveness of the subliminal visual messages in advertisements. AIDA model has been widely used by the past research in determine the effectiveness of advertisement (Corvi & Bonera, 2010). The visual subliminal advertisements chosen in this study are based on Mohamad, Halil & Mohamed Rosli (2017) effective combination elements in advertisement. Based on their study, the most effective advertisement combination elements are 1) shock and overly sexual/controversial and 2) shock, overly sexual/controversial and text. Thus this study adapted the same combination elements and added human element as another element for both subliminal advertisement messages chosen since based on study by (Hubbard, 1993), human interest is important element that can be compulsory to use in advertisement.

2.1 Framework

The conceptual framework that is concentrated on will have the two different combinations of elements in subliminal embedded visual imagery as the independent variables (IV). The effectiveness of the visuals will be the dependent variable as it will be measured using the AIDA hierarchy model as an instrument in this study. The combination was developed through a study in the application of elements into subliminal visuals (Mohammad, Halil & Mohamed Rosli, 2017) and has recognized that the most effective methods occurs when a combination of elements exists in a visual, especially one using subliminal embedding.
2.2 Sampling size

The population of this research is advertising course students studying in the Faculty of Arts and Social Science at a private university in Malaysia. The research aims for a sample size of 250. Purposive sampling will be used in this research. According to Lund (2010), the main goal of purposive sampling is to focus on particular characteristics of a population that are of interest, which will best enable the researcher to answer the research questions. In this research, the characteristics of the population required are students enrolled in a private university in Malaysia who are taking courses of Advertising in the field of Arts and Social Sciences.

2.3 Research Design

Image 1: The visual advertisements using a combination of body gesture and metaphor element in subliminal imagery that will be used in the study.

In order to identify respondents’ preference of visual subliminal advertisement, they will be given a set of advertisement that has been carefully selected for their association with combination elements of advertisements that have been adapted from Mohamad, Halil & Mohamed Rosli (2017). These advertisements will randomly arrange and not label due to the impact of the respondents not being biased when selecting the preference advertisement. Respondents will be asked to express their preference of the subliminal visual advertisement that utilize 1) shock and overly sexual/controversial + human interest element and 2) body gesture and metaphor + human interest elements using the five point Likert scales ranging from 1-strongly disagree to 5-strongly agree. The advertisements that will be used in this study is divided into two (2) parts which is two different combinations of visual elements in advertising that is used in subliminal imagery. The combinations are elements using 1) body gesture and metaphor with...
added human element and 2) the combination of shock and overly sexual/controversial element. The visuals can be referred to image 1 and image 2.

Image 2: The visual advertisements using a combination of 2) shock and overly sexual/controversial subliminal imagery that will be used in the study.

Next, to determine the effectiveness of the subliminal visual advertisements, AIDA model will be measured using 3-items scale for Attention, Intention/interest, Desire and Action adapted from Yi-Lin (2013) by assessing using 5-point Likert Scale ranging from 1-strongly disagrees to 5-strongly agree. The 3-items scale to measure AIDA can be referred to table 1 below;

<table>
<thead>
<tr>
<th>Variables</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Attention</strong></td>
<td>i. Would draw my attention to product</td>
</tr>
<tr>
<td>(Referring to Ads i.e; 1,2,3,4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ii. Makes a deep impression on me</td>
</tr>
<tr>
<td></td>
<td>iii. Differs from the norm</td>
</tr>
<tr>
<td><strong>Intention/interest</strong></td>
<td>i. I like</td>
</tr>
<tr>
<td>(Referring to Ads i.e; 1,2,3,4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ii. I am interested</td>
</tr>
<tr>
<td></td>
<td>iii. I am curious</td>
</tr>
<tr>
<td><strong>Desire</strong></td>
<td>i. I want to try</td>
</tr>
<tr>
<td>(Referring to Ads i.e; 1,2,3,4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ii. I believe that it is what I require</td>
</tr>
<tr>
<td></td>
<td>iii. I want to recommend to my friend</td>
</tr>
<tr>
<td><strong>Action</strong></td>
<td>i. I will learn more</td>
</tr>
<tr>
<td>(Referring to Ads i.e; 1,2,3,4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ii. I will purchase</td>
</tr>
<tr>
<td></td>
<td>iii. I will wait until discount to purchase</td>
</tr>
</tbody>
</table>

Figure 3: The adoption of AIDA model into the items scale in the method of the study.

This research design will help to define the success of the subliminal visual imagery and its elements by using AIDA as an instrument of effectiveness. With the independent variables that are the elements within the visual imagery of subliminal advertisement to be tested through the hierarchy of this model, the study will be able to determine the level of effectiveness in using the combination of elements in subliminal visual imagery.

3. DISCUSSION

According to Schaefer, new methods of advertising are emerging in the digital era that is reshaping the traditional world of advertising, and to stay on top of the game, marketers need to be able to utilize these new methods (Schaefer, 2009). This statement shows clearly that the current world of advertisement needs a new developing medium aligned with the propagation of the emerging technologies. A new fresh kind of advertisement of selling products as to convey the customers effectively is needed as the
community nowadays has immune themselves with the typical advertisements used in today’s environment. This study strongly believes that the elements can help for an effective advertisement using subliminal imagery. To disclose and give way to revelation, the targeted audience or consumers can attach themselves to a better understanding of the messages that are delivered to them with the use of the elements in the set of combination studied. The existence of the elements in the subliminal visual imagery in the sense of conveying an effective message across can be a key feature to ensure success.

The framework concept of this study is developed to seek the effectiveness of the elements itself. The elements that are a combination of visual components in subliminal imagery may lead to the value of the visuals in communicating the desired message and in turn carry incessantly leads towards the consumer/audience successfully taking action. This may guide future advertisements that use visual to communicate their ideas or messages to the targeted audience.

4. ACKNOWLEDGEMENT

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LIVED EXPERIENCES OF POLICEMEN INVOLVED IN A JUSTIFIABLE KILLING

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ABSTRACT

Homicide is treated with utmost concern when it comes to violent forms of crime; however, not all homicides carry criminal accountability. These cases are known as justifiable homicides or legal murders, which are commonly committed by police officers during work operations. From the time President Rodrigo Duterte came to power, the rate of crimes in the Philippines started declining but the number of murder cases done by police officers began to increase. Family members of the victims of these murders are usually the ones given attention but the police officers behind these homicides remain unrecognized. The researchers conducted this study to determine the lived experiences of policemen involved in a justifiable homicide. The data were gathered through in-depth interviews and were analyzed using Interpretative Phenomenological Approach (IPA). Three themes were generated from the data: (1) before the encounter, proper mental, emotional and physical preparation is essential (e.g. policemen are needed to be alert at all times, they should also be protected with safety gear); (2) during the encounter, policemen should always have presence of mind in order to perform the right actions in accordance to the law and protocol that they need to follow; fear and nervousness are also present at this point but courage must still prevail to get the job done; (3) after the encounter, the trauma caused by the incident may last for a while but as policemen, they should get used to it as it is already a part of their job. More importantly, the police officers emphasized that having faith in God is important in all three stages. Being a police officer requires courage, self-sacrifice, passion and dedication as policemen are putting their lives at risk to perform their responsibility in keeping the community safe. In addition, the law enforcing agencies should recognize their good works and improve the health care services and insurance provided for them so they can be more motivated to do their work.

Keywords: Justifiable killing; Law enforcing agencies, Policemen,

INTRODUCTION

Police officers have the responsibility of protecting the lives and property of citizens. They maintain order, catch lawbreakers, and work to prevent crimes in a community (Misiroglu, 2001).

Since the new president came to power, police officers face a more challenging role in the country. According to Rappler (2017), the weekly average crime rate on crimes against property went down from 301 cases in the 1st semester of 2016 to 209 cases in the 2nd semester.
– a decrease of 30.56% but the murder and homicide cases have gone up as the government continues its war against drugs. The murdered lawbreakers and their respective families are usually the ones given attention by most but police officers behind these legal murders remain unrecognized.

But faced with an either kill or be killed situation, law abiding officers can’t always weigh or even know all the consequences of their actions (Agar, 2012).

A justifiable homicide or legal murder is a type of murder which does not carry any criminal accountability. (According to Robin (1963), these cases are often encountered by policemen and are committed due to self-defense or any condition permitted by the law.

Critical incidents leave a profound effect not only on the involved officers but also on their family members. Officers certainly can be all these things, but they are also human beings who normally react to extraordinarily stressful and traumatic events (Chareon, 1999).

2. METHODS

This chapter provides the methodology used in the research such as the data gathering procedure. It is composed of research design, research locale, selection of the study, sampling procedure, research instruments, data gathering procedure and the analysis of data.

2.1. Research Design

The research design’s function is to give a guaranteed answer to the research problem. It gives a framework on how the researchers came about with a phenomenological approach. The goal of this study is to identify the lived experiences of policemen before, during, and after an encounter.

Therefore, the study centered on the qualitative type of research which required the conduction of in-depth interviews. It was an investigation that explained the lived experiences of policemen involved in an encounter through the answered questions given by the co-researchers.

2.2 Research Locale

In conducting the study, the information that were gathered came from the results of the in-depth interviews of policemen in the area of Pasig City particularly those policemen who were appointed in the main headquarter.

2.3 Selection of the Study

The selection of three (3) policemen ranged from thirty (30) to fifty-five (55) with the qualifications required before becoming a policeman regardless of their respective ranks, presented the focus of the study of the lived experiences of policemen involved in a justifiable homicide.
2.4 Sampling Procedure

The sampling procedure of the study is called purposive sampling. Purposive sampling is selecting sample based on the objective of the study. The reason why the researchers used it because there are target criteria for choosing the respondents and those are the three policemen who have been involved in a justifiable homicide.

2.5 Research Instrument

The following instruments were used by the researchers in gathering the data.

1.) Informed Consent, wherever possible, participants must be informed of the nature and purpose of the investigation. The researchers seek the approval from the selection who participated in the study through the informed consent.

2.) Voice recorder that kept the records of the words that the co-researchers said during the interview.

3.) Aide Memoire which contains a list of questions and the point that was secured during the interview session. With the connection of this instrument to the present study, the researchers used this to make sets of guide question to assist the co-researcher with further clarifying the life fulfillment of policemen.

Data Gathering Procedure

In data gathering, the researchers visited Pasig City Police Headquarters where policemen were found, to ask for permission that allowed the researchers to conduct a qualitative study regarding the lived experiences of policemen involved in a justifiable homicide.

A pre-qualifying form was not administered to determine the (3) Policemen since the only requirement for the co-researchers was to be involved in a justifiable homicide. After determining the co-researchers who were suitable for the study, the researchers provided informed consents stating the rights of the co-researchers to decline from the study, the confidentiality of their data, and the contact information of the researchers.

The voice recorder was used in order to record the whole interview and for analyzing the results of the study. Furthermore, the data gathered were analyzed by the researchers.

Data Analysis

Qualitative Data Analysis (QDA) is the range of steps and processes whereby researchers move from the qualitative data that have been collected into some form of understanding,
explanation or interpretation of the people and situations that are being investigated (Haregu, 2012).

The following stages of data analysis using the IPA (Interpretative Phenomenological Analysis) were provided by Smith and Osborn (2007):

1. **Collecting data**
   
   A questionnaire has been made by the researchers in able to gather the data. The instruments of the research such as the voice recorder, aide memoire, and PQF were used during the interview in order to gather data accordingly to the objective of the study.

2. **Looking for the themes in the first case**

   The gathered data from the interview were encoded and read by the researchers. The group then took notes of the important and credible responses of the policemen. Looking for the themes is an important process, and so the researchers took time in doing this and the themes thought-out went to the next step.

3. **Connecting the themes**

   The researchers determined the relationships between the gathered themes. Based on the progression which they came up in the transcript, an initial list was made in sequential order.

4. **Continuing the analysis with the other cases**

   The analysis of data went further. Explanations of each answer on every question were made. Emotions, tone of voice, and the answer itself were look through and observed by the researchers in order to make the IPA. Every gesture and tone of voice were noted for they reflect the lived experiences of the co-researchers.

5. **Write-up**

   The analysis became wider and deeper as the themes were explained and illustrated translating them into a narrative account. The table of themes was the basis for the account of the co-researchers’ responses in the form of the narrative argument that merged with the research transcription to support the cases. Cases were taken to clearly distinguish the statement of the respondents from the interpretation of the analysis.

3. **RESULTS AND DISCUSSION**

   This chapter covers the presentation, analysis and discussion of the data collected by the researchers based on the sequence of the statement of the purpose of the research. Through Interpretative Phenomenological Analysis on the series of in-depth interviews with three policemen resulted in the development of three master themes. These themes were as follows:

   - Experiences of policemen before an encounter;
For the first qualitative question: What are the experiences of policemen before an encounter?

<table>
<thead>
<tr>
<th>Master Theme:</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXPERIENCES OF POLICEMEN BEFORE AN ENCOUNTER</td>
</tr>
<tr>
<td>Superodinate Theme</td>
</tr>
<tr>
<td>Qualities of a Well-Prepared Policeman</td>
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<td></td>
</tr>
</tbody>
</table>

3.1 The experiences of policemen before an encounter

The purpose of this theme is to determine the experiences of policemen before joining an encounter. It also discusses the preparation they undergo before joining an encounter including having the right safety equipment. Furthermore, this master theme states about the qualities that make a well-prepared policeman.

3.11 Qualities of a well-prepared policeman
According to French (2010), there are key components essential in becoming a successful policeman, first is training. Policeman applicants undergo a tough selection process and should attend rigorous training. It is an essential for the policemen to be fully equipped with the knowledge of what to do and how to decide what to act since they deal with high risk operations. The next key component is physical conditioning; this will make policemen able to withstand any injuries that might come their way. And finally, motivation from their family or the agency for every police officer is needed for them to have a drive into doing their job and serving the public.

For the second qualitative question: What are the experiences of policemen during an encounter?

<table>
<thead>
<tr>
<th>Qualities Needed to Handle an Encounter</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Superordinate Themes</strong></td>
</tr>
<tr>
<td><strong>Keywords</strong></td>
</tr>
<tr>
<td>“...there’s no need for backing out...you have to accomplish your responsibilities...”</td>
</tr>
<tr>
<td>“…be clam and stay cool so you know when to pull out your gun...if you panic, your opponent will have the advantage...”</td>
</tr>
<tr>
<td>“…we already know that our lives are at risk...but then, you still have to do your job...to protect the people...”</td>
</tr>
<tr>
<td>“once you are already there you’re going to think...about your family...you may get wounded from an encounter or even die from one...that is why you should always have faith in God...pray before you join an encounter.. you will be guided by the Holy Spirit... you will be more prepared of what’s going to happen to you next…”</td>
</tr>
<tr>
<td>“…when he pulls out his gun, you will pull out yours as well...but if he will not pull out his gun, then you should not too…”</td>
</tr>
</tbody>
</table>
Protocol Followed by Policemen in Executing Actions

“If you need to back out, then you will…but you won’t know if the criminal will fight…if they will surrender, then capture them peacefully, but if they show any signal of harm, we already know what to do…”

“We’re still humans and we also feel fear, but because of the pledge we made, we should also protect ourselves…”

“Of course you don’t have any intentions to commit a homicide…us policemen do that because we are defending ourselves or the life of other people…”

3.2 Experiences of policemen during an encounter

The emphases of this theme are the experiences of policemen during an encounter. Under this theme, there are two superordinate themes; qualities needed to handle an encounter and protocol followed by policemen in executing actions.

3.21 Qualities needed to handle an encounter

This theme was supported by Leck (2013) saying that a good police officer should have communication skills to know the truth. One should always empathize and be considerate, to their environment and the people; including the criminal and innocent. Policemen should maintain their integrity because they are committed to do their work with honesty and dedication. In addition, he also asserted that in order to be a good police officer they should have a courageous mind and spirit.

3.22 Protocols followed by policemen before executing actions

This theme was supported by Miller (2008), who states that police officers use deadly force when they believe they have no choice in order to protect human life—their own or that of other citizens. Any force, however mild or severe, that goes beyond the level necessary to preserve life, prevent injury, or safely control the scene constitutes excessive force. Police officers characteristically restrain their use of force with citizens, sometimes at the cost of their own safety. He also asserted that the policemen’s deadly reaction requires a brave decision whether to harm or not and every decision that they make would either let everyone be safe, let a citizen be hurt or let themselves be harmed.

For the third qualitative question: What are the experiences of policemen after an encounter?
<table>
<thead>
<tr>
<th>Master Theme: EXPERIENCES OF POLICEMEN AFTER AN ENCOUNTER</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Superordinate Themes</strong></td>
</tr>
<tr>
<td><strong>After-effects and Conflicts Experienced by Policemen</strong></td>
</tr>
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<tr>
<td><strong>Qualities that Help in the Coping Process</strong></td>
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</table>
3.3 Experiences of policemen after an encounter

This theme mainly discusses about the experiences of policemen after an encounter. There are two superordinate themes under this; after-effects and conflicts experienced by policemen and qualities that help in the coping process.

3.31 After-effects and conflicts experienced by policemen

This theme was supported by Burke (1993) in his study which examined a research model developed to understand work satisfactions and emotional and physical well-being among police officers. Five groups of predictor variables identified in previous research were considered: work stressors, work-family conflict, coping responses, individual demographic and situational variables and psychological burnout components. Surprisingly, work-family conflict and individual coping responses were generally unrelated to measures of work attitudes and self-reported emotional and physical well-being.

In addition, Dalizon (2015) stated that officers and men of the Philippine National Police continues their uphill battle to provide police and their dependents the quality medical service they need without getting money from their own pockets. Even though they lack in manpower, they still have the dedication and heart to pursue this desire.

3.32 Qualities that help in the coping process

This theme was supported by Miller (2008) stating that a variety of coping strategies are used by policemen to help themselves and their colleagues carry out their assignments. Some of these strategies are used spontaneously by officers, some can be encouraged by departmental supervisors, and others can be taught and trained by mental health professionals. Furthermore, the article states that policemen involved in an operation needs a certain coping mechanism and traits that would satisfy their emotions and feelings such as fear, anxiety and occupational stress.

4. CONCLUSION
The phenomenological study came up with three (3) master themes in the lived experiences of the policemen involved in a justifiable homicide. The three master themes are the following:

1. Experiences of policemen before an encounter

This master theme shows the different experiences of policemen before an encounter of justifiable homicide particularly their holistic preparations before joining an encounter. In this master theme, there is only one (1) superordinate theme found and this is the qualities of a well-prepared policeman, where a policeman should acquire traits such as alertness, susceptibility and state of being equipped physically, emotionally and spiritually.

2. Experiences of policemen during an encounter

This master theme tells the different experiences of policemen during an encounter of justifiable homicide particularly the system that they follow and the traits and skills required in managing an encounter. In this master theme, there are two superordinate themes obtained, and these are (1) Qualities needed to handle an encounter, where they identified them as having good decision-making skills and being courageous, committed to the job, cautious, judicious, faithful to God and compassionate and (2) Protocols followed by policemen in executing actions, where they were identified as backing out, planning, sign of potential harm and self-defense.

3. Experiences of policemen after an encounter

This master theme discusses the different experiences of policemen after an encounter of justifiable homicide, particularly the problems and sensations caused by this encounter and traits associated with coping mechanisms. This theme has two (2) superordinate themes and these are (1) After-effects and conflicts experienced by policemen, where they were identified as anxiety, guilt, stress, rivalry and lack of medical services and (2) Qualities that help in the Coping Process, that were identified as being courageous, goal-oriented, humble, faithful to God, alert, judicious, and compassionate and learning how to manage responsibilities.

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**Bhinneka Tunggal Ika** Representation in Indonesia Tourism Promotion Video: a Study of Semiotics

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**ABSTRACT**

Lately, horizontal conflicts caused by differences in ethnicity, religion, race, are increasingly prevalent. People are so easily provoked. They act arbitrarily against something different with them. Yet the differences are actually long existed and happened, even in the kingdom era. In Majapahit kingdom, which at that time contained several religions and rituals, rise a motto “Bhinneka Tunggal Ika” in the Sutasoma manuscript. Therefore, planting and caring about the spirit of diversity is always maintained so that the next generation always animates in their life. In fact, the diversity and differences that exist precisely the value of harmony and beauty that is not necessarily found in other countries. As contained in the tourism promotion videos of Indonesia, which always display the harmony and beauty that is generated from diversity under unity of nation. In this study, researcher analyzed how the representation of *Bhinneka Tunggal Ika* in the tourism promotion videos of Indonesia. Using semiotic theory from Fiske (1987) and critical discourse analysis theory from Fairclough (1995), researcher collected information in video’s narration that became discourse of diversity, along with depiction of angles in those videos. The data used was a collection of Indonesian tourist promotion videos in 2016, consisting of most fifteen Indonesia tourist destinations in 2016, with duration 3 - 4 minutes. From the analysis, narrative quotations and location settings as well as the perspective of shooting in each video that became a sign in representing *Bhinneka Tunggal Ika*. The research results from fifteen destination promotion videos, were 9 video destinations that contain narrative of *Bhinneka Tunggal Ika*, i.e. diversity in ritual, religion, belief, ethnicity, and ethnic culture.

1. **INTRODUCTION**

**Background**

Individuals in social life are created diverse. Each individual has characteristics and custom that distinguished it from the other individuals. In the context of a state, diversity is seen in every ethnic group and ethnicity within it. No exception in Indonesia, a country known as the largest archipelago in the world. As a nation, Indonesia has a very long historical side with regard to existence as a nation of diversity. Although constitutionally, this nation confirmed as Negara Kesatuan Republik Indonesia (NKRI) in 1945, the forerunner of unity of this lands have existed since the time of empire era. At least during the Majapahit Empire, with the mention of Nusantara name by Mahapatih Gadjahmada in the “Sumpah Palapa” to describe the Majapahit region stretching from the Malacca Peninsular (now Malaysia) to West Irian (now Papua). The diversity of the Majapahit period is seen in the types of religions adopted by its inhabitants, i.e. Buddhism, Hinduism, and Islam, as well as the various ethnicities in it. As a country, Nusantara had been well established in practicing a form of respect for diversity. Until then Mpu Tantular, as a poet during the reign of King Hayam Wuruk, compiled a popular script to date, *Kitab Sutasoma*. In this Old Javanese manuscript, there was a fragment of words which later became the motto of the country by our founding fathers after the independence of Indonesia. “Bhinneka Tunggal Ika” is a very appropriate phrase to represent the diversity of people who
are in Indonesian territory. The word fragment which means ‘different but one’ becomes the hope of the founders of the nation to remind that basically, Indonesia people are a diverse society, even the diversity that has existed since this nation has not been named Indonesia. The message of this diversity, as contained in “Bhinneka Tunggal Ika”, becomes more value that is not necessarily owned by other nations. That as a country composed of more than 17,504 islands, with 300 ethnic groups and 714 tribes, and more than 1,100 local languages (BPS, 2010), in fact, the Indonesian nation remains united in the auspices of Negara Kesatuan Republik Indonesia. Even this diversity becomes an attraction for foreigners to come and see directly about the harmony that exists in Indonesia. This also becomes the capital for the Indonesian tourism, to contribute in conveying the diversity in every tourism promotion it created. One of these promotions is by making tourism promotion videos that are officially issued by the Ministry of Tourism of Republik Indonesia.

Research Question
From the background explanation, the focus of this study is the representation of “Bhinneka Tunggal Ika”. Thus, the formulation of the issues to be answered in this study is how the representation of “Bhinneka Tunggal Ika” in the Indonesia tourism promotion videos.

Research Objective
The purpose of this study is to find the representation of “Bhinneka Tunggal Ika” in the Indonesia tourism promotion videos.

2. METHODS
Research Methodology
In this representation study, the approach method used was a descriptive method. The researcher recorded the utterances of the video narratives containing a form of “Bhinneka Tunggal Ika” representation accompanied by the visual displayed in the video. Then described it and produced the expected output. In relation to the video used as the source of data in this study, researcher used a collection of tourism videos issued by the Ministry of Tourism of Republik Indonesia in 2017. The official video set by the ministry consists of 15 video destinations that became the flagship of Indonesian tourism this year. The fifteenth video destinations are Bali, West Papua, Yogyakarta, Jakarta, Labuan Bajo (Komodo National Park), Lombok (West Nusa Tenggara), South Sulawesi, Toraja (South Sulawesi), Wakatobi, Flores - Kelimutu, Tanjung Puting - Palangkaraya, West Sumatra, and West Java. As for each video has duration of 3 - 4 minutes.

The theory used in this representational research was Semiotics theory from Fiske (1987) and Critical Discourse Analysis (CDA) theory of Fairclough (1995). In his theory, Fiske suggested that on television or video, there were aspects of language that can be analysed in finding the representations contained in the video. Then on the Fairclough theory, there was a text dimension that analysed the language units contained in video speech. The explanation of Semiotics theory from Fiske and CDA theory from Fairclough will be deepened in the next section.

Theoretical Review
In the study, the theories used in analyzing were Semiotics theory from Fiske (1985) and the Critical Discourse Analysis theory of Fairclough (1995).

• Semiotics
Before discussing more about Semiotics theory from Fiske, first look at the general explanation of Semiotics theory. Simply put, Semiotics can be defined as the science of the sign (Noth, 1990: 3). This
clearer definition of Semiotics can be seen in the definition put forward by Saussure, which said if Semiotics is the development of the ‘semeion’ root (derived from Greek, meaning ‘sign’), which has the meaning as a science that studied the life of the sign is in the community. Hoed (2014: 5) said that signs are all things, be they physical, or mental, both in the world and in the universe, both in the human mind and animal biological systems, which are given human meaning.

Early in its development, Semiotics has been divided into two main streams, Structural Semiotics introduced by Ferdinand de Saussure and Pragmatic Semiotics introduced by Charles Sanders Peirce. The difference between the two lies in the form of analysing, in which Saussure is known as the Father of Modern Linguistics using dichotomous theory (signifier and signified) in Semiotics analysis. The Peirce between signification and interpretation involved cognitive, which he called Semiosis process. Semiosis is the process of forming a sign that departs from representamen spontaneously related to the object in human cognition and then given certain interpretation by the human being as interpretant (Hoed, 2014: 9).

Because the process of Semiotics analysis of Peirce involved three aspects, namely representamen, object, and interpretant, the analysis is called trichotomic analysis. Along with the development of knowledge, the two streams are joined in the same one roof, namely Semiotics only. Both streams can combine each other in a Semiotics analyser. As Hoed (2015: 5) said, there are three types in the Semiotics analyser, Structural Semiotics, Pragmatic Semiotics, and a combination of both.

The establishment of Semiotics as a science encourages the emergence of other Semiotics experts. The experts after Saussure and Peirce produced the Semiotics theories that made this science more functional by combining it with other fields of sciences. One of the figures who developed Semiotics in communication is John Fiske.

Fiske introduced the codes in television communications. He said that in the television show, there were codes of communication that became signs of Semiotics that contained meaning that can be seen by the audiences. In his book, “Television Culture”, Fiske defined the code as a rule-governed system of signs, which rules and conventions are shared amongst members of a culture (Fiske, 1987: 7). Furthermore, he explained that the codes connected the producer, the text, and the audience, and also at the same time became agents in the interpretation of related texts in a signed network. In a television or video, Fiske said that there were three levels of code contained in it, i.e. the first level; reality, second level; representation, and third level; ideology. Each level has its signifiers that correlated with the intent to convey.

At the first level, which is the level of reality, Fiske said that those codes are encoded electronically by technical codes, such as appearance, dress, makeup, environment, speech, gesture, sound, expression, and so on. At this level, a television or video work lifted the things or something that became the reality that exists in people’s lives. Then bring it to the visual dimension that can be shown to the general public.

At a higher level, at the level of representation, the codes of conventional representations existing, in reality were transmitted to form representations that seem to bring back the reality. Transmission in question, in this case, is a form of conversion into a code that was able to represent the existing reality in a form that can be enjoyed and more understood. Elements at this level are narrative, dialogue, setting, lighting, music, and so on. At the highest level, i.e. the ideological level, the codes that exist on the second level are then arranged so as to have coherence and social acceptability. The ideological examples, in this case, are an ideology of individualism, capitalism, materialism, et cetera.

**Critical Discourse Analysis**

The second theory used in assisting the process of representation analysing of “Bhinneka Tunggal Ika” was Critical Discourse Analysis (CDA) theory. Haryatmoko (2016: 17) said if the CDA method is crucial in the construction of meaning. It should, therefore, be taken into account who is involved in the production of the text, such as a producer, author, or speaker. At the level of the text, it must be done
structural analysis or level of relations. In the case of problems regarding the acceptance of the text, it involved the interpretation of the reader or listener. CDA involved a social context in the text product process until it became a sentence. In the content of the meaning of the text, there were interests entered by the text producer.

There are several analytical models using the CDA approach. In this study, researcher used the CDA model of Fairclough. In its approach, Fairclough posed two perspectives on CDA, i.e. communication events and the order of discourse. The researcher focused on the first kind because in this perspective there were three dimensions used in the CDA process, namely text, discursive practice, and socio-cultural praxis (Fairclough 1995: 97).

The text dimension, i.e. everything that refers to speech, writing, graphics, and its combinations, or can also be said all matters relating to the linguistic form of the text. The discursive practice dimension, i.e. all forms of production and consumption of text, which in the process of linking it already existed an interpretation. The last dimension, social praxis, which was all the broader goals, networks, and social culture praxis, in which there was an intertextuality understanding, that the text was shaped by and constituted social praxis. If formed into a chart, the Fairclough theory was illustrated as follows.

![Figure 1 Dimension Discourse by Fairclough](image)

In this study, the researcher focused in the text dimension. This was because the text dimension involved the linguistic aspects of the surgery, including analysing the language units in it. Starting from the language unit (words, phrases, clauses, sentence), cohesion and coherence, as well as how the words and sentences formed a meaning which then would be conveyed to the recipients of the text.

3. RESULTS AND DISCUSSION

Based on the code criteria at the level of representation as previously mentioned by Fiske and text dimension unit explanation by Fairclough, from 15 (fifteen) destination videos in the data sources of this study there were 9 (nine) videos featuring “Bhinneka Tunggal Ika” in it. The following is an explanation of each video containing that representation.

Jakarta

The first destination video in the data source displaying “Bhinneka Tunggal Ika” representation is Jakarta video. There were two passages in the video that contained the representation of “Bhinneka Tunggal Ika”,

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which was on the duration of 00.21 - 00.23 and 01.26 - 01.29. In the first duration, the representation codes involved were the narrative and setting codes. The narrative code in the video was “...wujud dari peradaban, menjadi bhinneka”. The narrative in the passage of the video very clearly conveyed the message of “Bhinneka Tunggal Ika”, that was with the existence of the phrase “menjadi bhinneka”. The phrase indicated that the existing culture in the Jakarta, with its dynamics, made the diversity (bhinneka) that coloured the life of Jakarta people. The diversity can be united to each other, whether from modernity and traditionally. This was supported by video setting featuring urban swam activities, followed by a waitress of a hotel that was organizing modern food at the time the narrative text “...wujud dari peradaban” was issued. Then the next video setting was a Buddha statue in a complex adjacent to the narrative text “menjadi bhinneka”. The icon of the Buddha was chosen because it depicts the Buddhism which became the earliest religion that entered into Indonesia, as well as a religion embraced by the creator of the motto “Bhinneka Tunggal Ika”, namely Mpu Tantular during the Majapahit Empire. In the second duration, 01.26-01.29, the narrative code in this video was “...wajah warga kota multikultur masa kini”. The word “multikultur” had very clearly stated about the diversity of “bhinneka” in Jakarta society. The narrative code was accompanied by a setting code that correlated with the text, the depiction of a group of young Betawi tribes who were demonstrating Pencak Silat Betawi complete with Betawi traditional clothes. Then also displayed a couple Chinese who smiled loose continued with attraction of barongsai (lion dance) that became characteristic of Chinese tribe.

Bali
The next destination video that contained a cultural diversity representation is Bali. In this video, the code used was narrative and setting. For the narrative code, the text indicating this representation appeared in the first text, along with the duration of 00.12-00.45, i.e. “Surga dunia, cagar suci, budaya yang memukau, rahasia dan tersembunyi, bagaikan di kahyangan”. The phrase “budaya yang memukau” in the sentence illustrated that Bali Island had a fascinating and endearing culture, which was different from that of other regions. The word “budaya” itself referred to the habits and behaviours of its people who were always steadfast in guarding the inheritance of their ancestors. The narrative code throughout this duration was also supported by the setting code, which displayed fishermen who were doing their work activities, then continued visually from a couple of man and woman who was worshiping in a sacred pool. In this video also displayed temples, places of worship of Hinduism, as well as a group of people who were worshipping in the temple environment. As known, the Hindu religion is the majority religion that exists on this island. The last setting in this duration that represented diversity was a Legong dance performance completed with a set of Gamelan Bali instruments that accompanied it.

Lombok (West Nusa Tenggara)
The third video featuring a “Bhinneka Tunggal Ika” representation is Lombok destination video. There were two parts in the video that represented it, that was on the duration of 00.30 - 00.38 and 02.31 - 02.51. Both displayed the narrative and setting code to present a “Bhinneka Tunggal Ika” representation. In the first duration, the narrative code shown was “...ritual eksotik di pulau indah”. The narrative code was adjacent to the visual presented, which was a group of Lombok people who wore traditional clothing was praying at the Pura (temple) that was on the side of beach. The ceremony was unique, typical of Hindus in Indonesia, especially Bali and West Nusa Tenggara. This ritual performance of Hindu prayer was chosen because this religion became one of the majority religion in the Lombok Island.

In the second part that presented representation of “Bhinneka Tunggal Ika”, the narrative code presented was “...perayaan bagi budaya, penuh karisma”. In textual discourse, the code had given a picture of the
diversity that existed in this nation, i.e. the clause “perayaan bagi budaya”. Culture that meant here was the local culture of Lombok that provided the treasures of the cultural richness of Indonesia. Then, the narrative code was supported with the setting code. Throughout the duration of 02.31 - 02.51, the visuals presented were Igeran Jaran Endut performance, complete with Gamelan players in the middle of the field accompanied by the laughter of the audiences. Igeran Jaran Endut is the original theater art of the Sasak tribe, which is now rarely staged. Afterwards, the setting code continued by Gendang Beleq players, a typical musical instrument of Lombok. The performers of musical instruments that usually complemented the Oncer dance was very attractive beat Gendang Beleq while dancing. Old, young, men, women, parents, children, gathered to watch the arts, forming harmony in society.

Toraja (South Sulawesi)
The next destination video that contains the form of “Bhinneka Tunggal Ika” representation is Toraja. Just like in the previous video, the code that appeared was the narrative and setting code. In the duration of 01.36 - 02.45, the description of the narrative describing “Bhinneka Tunggal Ika” was “Toraja, dengan upacara kematiannya yang agung, yang mengumpulkan para keluarga bangsawan kembali dari penjuru bumi, mengantar sang wafat ke kehidupan kekal, sebelum kembali meneruskan kehidupan, tetap dengan kesetiaan tradisi, dan Sulawesi yang merengkuhnya. Seolah siap menjaga nama besarnya, dengan begitu ragam peninggalan masa lampau yang lestari”. In the narrative, there were keywords that contained the representation, the clauses “…upacara kematiannya yang agung…”, “kesetiaan tradisi”, and “…peninggalan masa lampau yang lestari”. These three clauses became a signifier of the uniqueness of traditions that exist in Toraja. There was a great funeral tradition there, which became a form of inheritance from previous ancestors. The tradition was a wealth that continued to be preserved to date and a color in the diversity of traditions that exist in Indonesia.

The narrative code was supported by the setting code in the form of visual traditions Rambu Solo. Rambu Solo was a tradition of native death ceremony of Toraja people. In the setting of the video, people perform the tradition of Rambu Solo from the rapture of the corpse in the form of Tongkonan (Toraja traditional house) to the delivery to the funeral complex on Toraja cliff called Londa. Afterwards, the setting within that duration of the video was a tradition of tribute to the ancestors in the night. About the people of Toraja who pray for the spirits who had died in their own way. In the duration of this video was also revealed Megalithic relics, the stones of Menhir, large stone carved like the human faces, which was considered a replica of the deceased (Toraja people called it Tau-tau).

Of the two codes contained in this destination video, it represented that Toraja society had its own way of honoring dead bodies and spirits. The uniqueness that cannot be found in other parts of Indonesia provided the diversity that had existed from the past until now.

North Sumatra
In this destination video, there were three parts in the video that showed the representation of “Bhinneka Tunggal Ika” in North Sumatra, which were on the duration of 01.56 - 02.10, 02.21 - 02.28, and 03.03 - 03.15. The codes involved in the formation of representations were narrative and setting code. In the first duration, the narrative code conveyed was “...Tempat memahami hubungan dengan para leluhur, dengan tarian, dengan tradisi yang penuh warna ”. The narrative had coherence in its syntax, with the meaning to be conveyed was that North Sumatra people had a unique and charismatic way of honoring their dead ancestors. One of them was with a dance that became a symbol of reverence. The phrase “penuh warna” in the sentence had an indication that
many traditions within North Sumatra people were the diversity within the culture itself. Then the setting code on the duration was displayed visually from the carving motif on the front of the traditional house of North Sumatra, namely Rumah Bolon. There was also a Tor-tor dance setting, and a group of mothers who were weaving Songket, ethnical cloth of Batak tribe.

In the second duration, the narrative code that uttered was “...Dengan ritual yang anggun dan mistis. Martabat para penghuni pegunungan. Martabat pesisir dan masyarakat kota. Kota yang hidup”. The word “ritual” referred to a practice related to a specific purpose that existed only in an area. In this case was North Sumatra area. Then the word was followed by the word “anggun” and “mistis”, which indicated that the ritual had a very high value, and not just done by anyone and anywhere. In the next narrative, there were clear signifiers about diversity of North Sumatera society. The clause “penghuni pegunungan” and “pesisir dan masyarakat kota” indicated that North Sumatera society consisted of many various people and background; from mountain region until central region. And in every region, the society had their characteristics and cultures which different each other. The existence of the setting code in this video also supported the formation of “Bhinneka Tunggal Ika” representation, which was a description of Batu Persidangan tradition, which was used in making decisions in indigenous people of Batak tribe. Then the setting continued by Tor-tor dance completed with traditional music instruments, and also showed the traditional marriage ritual in Batak tribe. In the last duration, the setting code in that duration video, there was a Malay house and also showed a Malay dance, Zapin.

The final part of this destination video, which was 03.03 - 03.15, had a narrative code in the form of “...bergerak, kiblat bagi multikultur yang harmoni”. The word “multikultur” contained in the text was a clear sign that in the North Sumatra society was a diverse society. The word “harmoni” that followed “multikultur” signified that although there were many differences in North Sumatra society, they can still live side by side which was the beauty. Setting on this duration also supported the narrative code. In the visual, depicted religious worship houses of Confucianism, Christianity, and Islam, and displayed ritual worship of the Islamic community who were in the mosque.

Flores - Kelimutu
There were two sections in the video of this destination that represented a “Bhinneka Tunggal Ika” representation, which was the duration of 00.12 - 00.40 and 01.02 - 01.36. Similar to previous videos, video codes depicting these representations were narrative and setting code. In the first duration, the narrative in this video was “Flores, mistis, suci terpelihara, warisan yang turun temurun”. The word “mistik” became the keyword that in Flores society believed in things related to belief, which was the inheritance of their ancestors “warisan yang turun temurun”. This tradition-shaped heritage certainly had distinctions and uniqueness with other regions, thus providing the color of diversity in terms of local beliefs. Setting in this video was the paddy fields with the existence of the farmers who were harvesting rice, and continued setting of custom house Flores, Musalaki.

In the second duration, the narrative code that uttered was “Tradisi yang hidup dari perayaan. Flores dengan ritualnya”. In the text, the clause “tradisi yang hidup dari perayaan” implied that Flores people had celebrations that produced the traditions that lived in them. The tradition continued throughout the festivities of the Flores society in NTT. Then in the clause “Flores dengan ritualnya” described that Flores society had its own ritual, which was different from other rituals from other regions. The narrative was supported by the setting code in this video, which features Caci dance (dance of war), a typical dance of NTT, surrounded by Flores people who wore their customs, as well as musical instruments. After that setting, continued by Rangkuk Alu dance (bamboo jumping dance), and followed by Ja’i dance setting.
**West Sumatra**

The portion of this destination video that represented “Bhinneka Tunggal Ika” was available along 01.28 - 02.35, using the narrative code, in the form “Di sini, kita berwisata bersama tradisi yang terus hidup. Bersama warisan leluhur ratusan tahun. Dengan serunya Pacu Jawi. Dengan seni bela diri Silat yang artistik dan orisinal. Dengan Istana Pagar Rayung, saksi abadi kejayaan Minangkabau. Dengan rentak, hentak, dan ayunan putaran Tari Piring yang tak putus memukau dan menghentikan nafas kita”. The narrative text contained utterances to denote the unique culture of Minangkabau that characterized Indonesia’s diversity. The phrase “tradisi yang terus hidup” and “warisan leluhur ratusan tahun” had meant that the culture and traditions that existed in Minangkabau were long-standing cultures and traditions within the society. These cultures and traditions had been embedded in Minangkabau society and helped to regulate attitudes and behaviours in their lives. Specifically, the narrative mentioned typical Minangkabau art, i.e. *Silat* and *Tari Piring*. These arts were unique in Minangkabau region only. As regards to the setting code, in the visuals was displayed *Tari Piring* accompanied by traditional Minangkabau musical instrument with the background of Pagar Rayung Palace. And then, the setting continued by Pacu Jawi and Silat tradition. The existence of this setting code supported from the narrative code in this West Sumatera destination video.

**Yogyakarta**

In this destination video, there was a section that described the representation of “Bhinneka Tunggal Ika”, by involving the narrative and setting code in it. The duration that contained this representation existed for 01.01 - 01.30. The narrative used by the text producer was “Agama merasuk ke peri kehidupan, kaya dengan cita seni dan rasa pekerti, arif membawa perayaan tradisi ke bentuk budaya terkini”. The phrase was signified by the clause “arif membawa perayaan tradisi ke bentuk budaya terkini”, which described that Yogyakarta people had the wisdom that produced traditions that were united with the society, to the present time. These traditions later became a distinctive identity that colored the differences with people from other parts of Indonesia. The setting that later became the code in this video was a man who was carving stones forming the Buddha, then proceed with the setting of Buddha reliefs at Borobudur Temple. Afterwards, was setting a set of Gamelan followed Niyaga (Gamelan player) who were playing the Gamelan. Then also visualized Golek Ayun-ayun dance, until then replaced the setting of Ramayana colossal dance. Buddha reliefs described the religion that first entered Java, as well as to show the Borobudur Temple, as the largest Buddhist temple located in this destination. Then the Gamelan, Golek Ayun-ayun dance, and Ramayana colossal dance were the signifiers of Yogyakarta arts that gave color to the diversity of dances and musical instruments in Indonesia.

**Manado (North Sulawesi)**

The last destination video containing a “Bhinneka Tunggal Ika” representation was Manado (North Sulawesi) precisely on 00.51 - 01.10. As with all other videos, in this destination video also used the narrative and setting code displayed the representation. The narrative contained in this video was “Manado, yang merangkul, yang merangkul ajaran Kristiani, relungnya mampu menjadi sebuah titik temu perhelatan dan pertukaran”. The clause “merangkul ajaran Kristiani” signified that most people in Manado were Christian. And about how do Manado people live according to Christian values. The setting code in this video supported the image formation of the narrative, the visual retrieval of Jesus Christ statue in Manado which became the largest Jesus statue in Indonesia. Then the setting continued with the search of the inside of the church, from the altar, the front, until the amphitheater.

These were videos in a data source containing representational forms that describe the “Bhinneka Tunggal
Ika” owned by Indonesia people.

4. CONCLUSION

From the results of the analysis presented earlier, it can be concluded that of the fifteen tourism videos issued by Ministry of Tourism in 2017, there were nine videos containing the representation of “Bhinneka Tunggal Ika”, i.e. Jakarta, Bali, Lombok (West Nusa Tenggara), Toraja (South Sulawesi), North Sumatra, Flores - Kelimutu, West Sumatra, Yogyakarta, and Manado (North Sulawesi). The form of representation in the videos used code of narrative and setting, as proposed by Fiske. And then, the diversity as “Bhinneka Tunggal Ika” representation appeared in the diversity of ritual, religion, belief, ethnicity, and ethnic culture.

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6. REFERENCES

ABSTRACT

In the recent war in Marawi City in Mindanao, Philippines, some acts of kindness for constructive theological dialogue may be found. “Muslims have protected and helped Christians to escape from almost certain death. Even now Christians are assisting thousands of Muslims who have fled from Marawi for safety. These are indisputable signs that there is no religious war (CBCP, 2017).” There is a need to reconsider public theology both as a practice and field of study. By discussing public statements made by Christians faced with crisis in Marawi, this research contributes to the development and understanding of public theology through Dialogue.

As public theology is concerned with public life and social issues, the research is of interest to scholars and students of theology, political science, sociology, religious studies, etc., as well as practitioners, policymakers, and professionals in the public sector, civil society, churches, and Christian organizations. This research includes reflections on the conditions of fruitful theological dialogue between Christians and Muslims using qualitative data from recent published documents. It emphasizes that dialogue does not mean glossing over real differences but, rather, engaging in a process in which participants may acquire new respect for the faith of others and new insight into their own faith towards shaping a better world.

1. INTRODUCTION

Mutual respect and understanding between the world’s religions has become increasingly necessary in a global society where peace can be tenuous (Peterson, 2012). Nowadays Interreligious Dialogue (IRD) is greatly diluted and unclear. That is why this research wants to understand the importance of correct positioning of fundamental principles of dialogue among religions that are acceptable to all. Dialogue between people of Christian faith and other faith traditions becomes important; and removing barriers, in order to learn more about one another and dismiss fears, is a necessary first step for increasing global stability and promoting the coexistence of nations. As Hans Kung (1993) asserted, there is “No peace among nations without peace among the religions,” and “No peace among the religions without dialogue among the religions.” Violence, discrimination, and insurgency in the name of religion have long been problems in Southeast Asia, straining relations between peoples of different faiths. Southeast Asia is also an emerging front on the “war on terror.” In 2012, the United States conducted its first strike in Southeast Asia, targeting alleged leaders of the Abu Sayyaf and Jemaah Islamiyah who orchestrated terrorist attacks in the region (Ahmed and Martin 2012).

The contemporary reality of the Philippines is one of deep violence. The Philippines is under a critical moment of history. It ranked the highest in impunity, according to the 2017 Global Impunity Index conducted by the University of the Americas Puebla and UDLAP Jenkins Graduate School. It has coincided with the unleashing of uncontrollable violence, especially in Mindanao. As a result, insecurity, fear and anxiety characterize the lives of many people throughout the Autonomous Region in Muslim Mindanao (ARMM). President Rodrigo Duterte placed the entire Mindanao region under martial law after the Maute, a radical Islamic organization, backed by other jihadist extremists, attacked Marawi City. Yet,
some acts of kindness for constructive theological dialogue may be found. “Muslims have protected and helped Christians to escape from almost certain death. Even now Christians are assisting thousands of Muslims who have fled from Marawi for safety. These are indisputable signs that there is no religious war (CBCP, 2017).”

There is a need to reconsider public theology both as a practice and field of study. By discussing public statements made by Christians and Muslims faced with crisis in Marawi, this research contributes to the development and understanding of the IRD in the Philippines. This paper is not about political nor social tensions but rather it seeks to provide a theoretical framework of Public Theology in the light of IRD. Thus, the purpose of this paper is to provide an alternative understanding of public theology in the light of IRD in the context of Marawi crisis in the public sphere. It seeks to answer the research questions: What is Muslim and Christian Dialogue in the Philippines particularly in the aftermath of Marawi crisis? What is Public theology as an emerging framework in social context? How can we understand Public Theology in the light of IRD?

2. METHODS

The research design of this study used a descriptive-qualitative method. Miles and Huberman (1994), Denzin and Lincoln (2000), and Creswell (1998) provide varied but useful general treatments each covering a range of approaches to qualitative research in seeking a clearer understanding of the Muslim and Christian dialogue particularly in the city of Marawi, Philippines. The study seeks to clarify the issue on Muslim and Christian relationship. The Focus Group Discussion (FGD) is one of the qualitative research methods to be utilized in the search for answers to such questions. FGD is a type of in-depth interview accomplished in a group, whose meetings present characteristics defined with respect to the proposal, size, composition, and interview procedures (Morgan, 1988). In the analysis, the words and their meaning, the context in which the comments were made, the internal consistency, frequency, the extent of the comments, the specificity of the answers, and then importance of identifying the main ideas, all should be considered (Krueger, 1994).

Fig.1 The Research Framework

2.1. The Participants
This qualitative research was carried out through purposive sampling technique using FGD of 10 IDP’s from Marawi who are now living the National Capital Region. The Asian Center for Journalism at the Ateneo de Manila University, Manila (2017) referred to the persons who sought refuge during war are the internally displaced persons (IDPs) from different parts of Marawi – referred to colloquially as ‘bakwit’, from the verb ‘evacuate’ – have not returned to their homes years after they sought refuge from the war. IDP have mixed emotions about the Marawi siege – some yearn to go back to a peaceful Marawi while others said they already bade goodbye to the city of their birth the moment they fled to safer grounds.

Table 1 The Profile of the Respondents

<table>
<thead>
<tr>
<th>Concealed Identity (for security reasons)</th>
<th>Profile</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdul</td>
<td>Father</td>
<td>Male</td>
</tr>
<tr>
<td>Maria</td>
<td>Out-of-School Youth (OSY)</td>
<td>Female</td>
</tr>
<tr>
<td>Karim</td>
<td>Student Leader</td>
<td>Male</td>
</tr>
<tr>
<td>Kim</td>
<td>Youth Leader</td>
<td>Female</td>
</tr>
<tr>
<td>Ana</td>
<td>Mother</td>
<td>Female</td>
</tr>
<tr>
<td>Jay</td>
<td>Student</td>
<td>Male</td>
</tr>
<tr>
<td>PJ</td>
<td>OSY</td>
<td>Male</td>
</tr>
<tr>
<td>Anton</td>
<td>OSY</td>
<td>Male</td>
</tr>
<tr>
<td>Solomon</td>
<td>OSY</td>
<td>Male</td>
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</table>

The preceding table showed the profile of IDP’s from Marawi, from different walks of life. This included a father, mother, student, an out-of-school youth and youth leader. Most of the respondents are now in a shelter located in Quiapo, Manila, Philippines. Due to the fear of getting caught again in the crossfires of war, they decided to stay in Manila.

2.2. Data Collection

The broad and group picture of the IDP’s that follows is based on multiple sources and methods of collecting data. Firstly, I conducted a literature review both manually and electronically as secondary sources of data and information. Organizational documents like magazines, pamphlets donation envelopes that they usually provide during their service were also helpful in providing information and in validating what has been gathered from two primary sources, participant observation and interviews. Secondly, and most importantly, I conducted multiple one-on-one in-depth interviews with 10 IDP’s from Marawi. They were selected through purposive sampling and snowballing technique. Almost all of them readily consented to my request for interview that usually lasts for some 20 minutes or so. There were a few who looked a bit surprised and hesitant at first but agreed just the same after I introduced myself and explained the social scientific purpose behind my study.

2.3. Treatment of the Data

After the data-gathering phase, using multiple sources and methods was completed, I applied the
normative steps to process and analyze qualitative data: (1) read the transcript carefully and repeatedly while keeping an open mind and do subjective audit to keep my biases in check as much as possible; (2) labeled the relevant words, phrases to the research questions; (3) selected the most salient patterns and created categories by bringing several codes together; and finally (4) created and labeled the categories and themes, described the connections between them, and drew “logical cohesive patterns of meaning and values (Bryman, 2012).”

2.3. Research Setting and Demographics

It is indeed a rather exceptional case in the history of Islamization for a Muslim majority group to become a minority, in any given country or situation. In fact, the majority of the Filipino people today are Christians (86% Catholics) of an estimated population of 104 million (2017). The Muslims are almost 5%, concentrated mainly in the southern part of the country, the tribal people 5% and 7% the Protestants (plus others). The struggle of the Moro people, from the beginning of the Spanish colonization (1565) in the Archipelago, has always been a struggle for self-determination and, up to now, those who are still active in the struggle consider themselves unconquered people, although there is a growing effort on the part of the present Government to unite people of different cultures and religions in the country. This greatly affects the development of Muslim-Christian relation in the Philippines.

The country’s lone Islamic City has 96 barangays and a population of 201,785 based on the 2015 Census of Population of the Philippine Statistics Authority (PSA). It is the most populous area in the five-province, two-city Autonomous Region in Muslim Mindanao (ARMM). The Prelature of Marawi was established in 1976 with Bienvenido Tudtud as its first Bishop. It was in this Islamic City where the seeds of interfaith dialogue — the dialogue of life and faith — were planted and nourished and transplanted to other dioceses, archdioceses and vicariates in Mindanao, the rest of the Philippines and beyond. The Prelature was set up, in accordance with Pope Paul VI’s mandate, for “dialogue of life and faith” with Muslims, “not for conversion” of Muslims. It was under Bishop Tudtud when Duyog Ramadan, the Christians’ accompaniment of their Muslim brothers and sisters during the month-long Ramadan, began.

3. RESULTS AND DISCUSSION

I tried as much as I could to engage some IDP’s from Marawi who are now staying in Manila to talk to me but I only got a few. Some of them are now staying in Manila and finding a better life. Some are still stuck in the evacuation centers in Marawi city. Almost 100 people have escaped on foot, while others have swum across the river. Most of my interviewees were students. Some of them recounted their stories in narrative form. I would just like to highlight the Key-words—in-context (KWIC) based from the narrative stories of the IDP’s.

3.1. A Memory of the Past

The Islamic State of Iraq and Syria (ISIS), or the Islamic State (IS), now holds a significant portion of the two countries in its name, and has for the most part held it for over a year now despite a sustained bombing effort by coalition forces and enemies on multiple fronts. Now it continues to invade Marawi—a small city in the Mindanao, Philippines. Since the clashes between government forces and the Maute Group and its allied terrorist groups (Abu Sayyaf and the Bangsamoro Islamic Freedom Fighters,
 according to the military) started on May 23, 2017 many heartwarming accounts have come out on how Muslims — poor, middle class or belonging to prominent clans — helped and are helping protect Christians from the terrorists, orienting them on what to do and what to say when a terrorist approaches them, and how prominent Muslims. The respondents led the Christians to safety. “When residents hiding in their houses and buildings saw the group moving out to cross the bridge to safety, they joined them — Muslims and Christians. There are at least a total of 172 according to a volunteer at the Provincial Crisis Management Committee.

When asked about their physical appearance when they rescued some Christians, “Ang amoang gisuot, mao lang among nadala (The clothes in our body when we moved out were all that we have),” Three days after, Ana was forced to leave their home. “Walang ibang pumasok sa isipan ko kundi ang kaligtasan ng aking pamilya,” (I am just thinking of my family) she said. We just walked and walked and walked until we reached safer ground,” she said.

"Ang biktima ay yung mga bata na walang kamuwang-muwang, ang mga pinapatay ay mga kristiyano. (The victims of this crisis in Marawi are the innocent children, women and men have had their lives brutally and tragically ended for no other reason except that they are Christians)."

When asked what they do when faced with that tragic situation, Kim and Maria said they were asked by their parents who are Muslims to “help Christians in need.” “Tao rin sila tulad namin (they, too are human beings).” When asked what did they do to save the lives of Christians, Abdul said he saw nothing wrong with helping people who are in need in such an atmosphere. “Kahit iba pa ang paniniwala nila, tutulungan ko sila (Even though their religion is different from us, still I will help them).” he said.

Pj, Anton and Solomon, did not mind the danger ahead of them when faced with a tragic situation, “sinamahan naming sila na magtago hanggang ma-rescue kami ng mga sundalo at makalabas ng Marawi (we were hiding and then the soldiers came and helped us)” When asked what happened or transpired during their hiding, they said “nag-usap kami na parang magkakapatid (we just talked as if we were brothers).” The terrified Christians escaped Isis militants in the Filipino town of Marawi by wearing hijabs borrowed from one of the respondents. “I have known a Muslim friend protecting Christian worker by letting them borrow a hijab.”

3.2. KWIC: The Narratives of IDP’s

Table 2 Summary of KWIC

<table>
<thead>
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<th>Key Themes</th>
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<tr>
<td>Respect for Human Life</td>
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<td>Respect for Human Dignity</td>
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<tr>
<td>Human Rights</td>
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<tr>
<td>The Common Good</td>
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<td>Solidarity</td>
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The following themes were identified through the narratives of the IDP’s: (a) Respect for Human Life, (b) Respect for Human Dignity, (c) Human Rights, (d) The Common Good, (e) Solidarity. The key themes emphasized the most basic form of dialogue is when Christians and Muslims learn to live together as
neighbors, friends and brothers/sisters. Along with the promotion of the common good and human rights, participation is a key goal of solidarity because all persons have the right and duty to become “principal architects of their own economic and social development.” Participation denotes substantive contribution to society; it is not just a formal, procedural task to be valued in abstract from the ends served by it. In other words, genuine participation contributes to true human flourishing and the flourishing of the community in concrete ways. Moreover, it is freely chosen and consciously recognized as a duty that all persons share. As members of a community, exercising this right and duty requires willingness to cooperate with others, to make compromise when necessary and to take seriously the expertise and wisdom of others (Beyer, 2014). Ordinary Muslims are kind and try to help however they can — they’re often first on the scene, rescuing the injured and taking them to hospitals. This vision of the common good inspires and motivates transformational action, but which is also enjoined to bear witness to the core principle of which is shared humanity. This vision of shared humanity is the essence of all dialogue.

The appeal of the ethical wisdoms of all human cultures has always insisted on the need to look at the other, male and female, to take them as my fellow humans, to discover them as my other self, as my neighbor, without whom my own life does not come true. And lately, this principle of interdependence that has travelled with us as the fruit of the evolution of life, the principle of plural maintenance of all lives, expands in consciousness towards all other living beings and vitally needs them. The foreword to The World is Yours to Change, a volume of essays published as a response to the terrorist attacks of September 11, 2001, opens with the following lines embodying the spirit of awareness of our shared humanity:

To desire peace, to wish for the happiness of one’s family, to seek a secure and safe life-those are the shared sentiments of people everywhere. There is no parent anywhere who does not grieve at the death of a child in war (Ikeda, 2002).

This vision of shared humanity is at the basic level of dialogue of life. It the “praxis” of public theology that respects Human life, Human dignity, Human rights, promotes the common good and Solidarity. Thus all these themes derived from the context of Marawi gives a new understanding when dialogue is a necessity in a war-torn area like Marawi, the dialogue of life and action are needed “to counter extremism and to promote the justice and peace that befits our common faith in one God who is Lord of all humankind and of all creation (Forde, 2013).” It is with this kind of dialogue that can help every human being. It assures that Muslims and Christians, as individuals and communities, build bridges rather than walls, and include rather than exclude each other. Interfaith Dialogue aims to bring about the understanding, mutual respect and cooperation essential for both integration and social harmony.

Tudtud likens it to breaking down walls and building bridges- a process where people enter into a relationship, bind themselves together and results in communion (Tudtud, 1988). This kind of dialogue usually takes place at the grassroots level – in neighborhood communities, villages, and schools. There is an opportunity for Christians and Muslims to meet, interact, and share with each other their life and experiences, their joys and sorrows, their hopes and dreams. This was even exhorted by the first cardinal from Mindanao also says Muslim leaders can correct terrorists on their wrong interpretation of Islamic teachings: "With the tragic reality of terrorism, IRD has become more imperative and indispensable," (Quevedo, 2017). Swidler (2013) claims “that only if the truth statements were placed in their historical situation, their historical Sitz im Leben, could they be properly understood.” The relevance of the Marawi brings context and time as key elements of interreligious dialogue analysis.
In the recent pew research survey (2017) on extremism, “eight-in-ten Muslims (82%) say they are either very concerned (66%) or somewhat concerned (16%) about extremism in the name of Islam around the world.” This is similar to the percentage of the U.S. general public that shares these concerns (83%), although Muslims are more likely than U.S. adults overall to say they are very concerned about extremism in the name of Islam around the world (66% vs. 49%). Jereza (2016) stated that “Religious conflicts have taken hundreds of thousands of lives in the last few decades in Southeast Asia alone.” While extremism continued marginalization of religious minorities and the instability that this creates; conflicts between claims to religious freedom and civil and political rights; and rising anti-Muslim sentiment. No single legal or religious principle is the solution to these problems. The shared humanity in the context of Marawi is a real example of genuine care for the other. Kyle Greene (2015) observed that the current global events and topics in the international community, few have been covered for quite as long and with as much attention as the various rebel uprisings, political turmoils, and terrorist groups which are establishing themselves across the Middle East and Southeast Asia over the past several years. According to USAID’s (2017) new policy guidance on Violent Extremism and Insurgency, “Violent extremism refers to advocating, engaging in, preparing, or otherwise supporting ideologically motivated or justified violence to further social, economic and political objectives. Insurgency is the organized use of subversion and violence to seize, nullify or challenge political control of a region.” It is therefore difficult to generalize the problems faced by certain communities like that of Marawi. The feared ISIS bears the name of a religion: Islam. In other parts of the world, reports of “Islamophobia” have begun to surface. “We are dealing with terrorists who use religion. However, they are not the [majority of] Muslims. These terrorist people are violent and radical.” Sison (2017) warns, though, against a sweeping generalization against Muslims: “We do not condemn all Muslims!” This attitude could also lead to further isolation not just of the radical sectors but also the isolation of those who are moderates. The key themes based from the FGD is a manifestation that there is no religious war happening in Marawi but rather a foreign ideology that creates a culture of violence and terrorism.

3.4. A Proposed Theoretical Framework
The story of Muslim-Christian unity in Marawi worth sharing to the whole world that is why it can be a basis for understanding Public theology as a form of IRD in the public sphere.

Fig. 2 Public Theology as a Form of IRD in the Public Sphere
Public theology is the result of the growing need for theology to interact with public issues of contemporary society. “Public theology” is a contraction of terms “public” and “theology” referring to a theology which critically reflects on both the Christian tradition as well as social and political issues. This dialogue is seen to benefit both theology and society. However, not all practical theology is public theology, in other words aimed at a non-ecclesial general audience. Practical theology is also theology for the church that is for a Christian audience, and is theology for an academic audience. Nevertheless, one of the tasks of practical theology is to include the public dimension in its work (Osmer & Schweitzer 2003). However, the task of this paper is to establish a certain link of PTT and IRD in the context of everyday life on a local, national and global level which I call the public sphere. The task of practical theologian and practical scholar is to transmit the knowledge to the people. Thus, theology in this regard is “bringing theology into dialogue with contemporary culture (Osmer & Schweitzer 2003)” that can provide a theoretical basis for interreligious dialogue in the Public Sphere.

What makes theology distinctive as a discipline is that it pushes beyond describing and analyzing the history and meaning of religious faith and witness (religious studies), to critical assessment of claims to validity expressed or implied in religious faith and witness. According to Kjetil Fretheim (2016) the term public theology thus refers to both a practice and an academic discipline. To the extent that “public theology scholars make their own contributions of this kind, they act as practical-public theologians.” This includes analysis and assessment of whether the metaphysical and ethical implications of those claims are true, and in what sense. Theology thus presupposes but is distinct from the related disciplines of philosophy (especially metaphysics, ethics and philosophy of religion) and religious studies. Theology is logos about theos, however theos is conceived. Christian theology is critical thinking about data provided by Christian faith and witness. Of course, theology can also be Jewish, Muslim, Hindu or Buddhist, and so on. In which case, it is critical thinking about data provided by Jewish, Muslim, Hindu or Buddhist faith and witness respectively.

How to do public theology? I simply propose dialogue in which the essence is shared humanity. Dialogue is the key to understanding differences. In public theology, one can engage in dialogue. Public theology is committed to seeing, understanding, and interpreting these signs of the times, to proclaim hope and to make a difference. Understanding another’s tradition, religion and belief system contributes not only to easing tensions, but also to overcoming isolation and entering into each other’s reality. This took place in the context of a then innovative task: the ‘building of a dialogical church’ (Hinze 2006).
In the world where everyone talks about peace, including dictators and military, it is important to specify what our concept of peace is and how it can be sustained. Max Waren (1959) presents this point with the following beautiful messages:

Our first task in approaching another people, another culture, another religion; is to take off our shoes for the place we are approaching is holy else we may find ourselves treading over men’s dream, more seriously still, we may forget that God was there before our arrival.

In The Power of Religion in the Public Sphere, Charles Taylor (2011) argues that one “myth” of the Enlightenment is the “special status” attributed to “nonreligiously informed Reason.” He suggests that assuming that “religiously based conclusions will always be dubious and in the end only convincing to people who have already accepted the dogmas in question” does not hold up, nor does the assumption that moral-political issues are best resolved by secular reason, understood “as a language that everyone speaks” and can agree with. I would argue, however, that it is clearly time to move beyond the work of validating religious thought or any kind of thought “as a language that everyone speaks.” In my view, as a teacher, our students need to become fluent in many “languages,” many stories, and many practices, if they are to lead others towards interreligious peace. “It is in recognition of this role that the mediating role of narratives in the relations between different religious traditions becomes an important resource for interreligious dialogue (Francisco, 2004).”

4. CONCLUSION

The challenge posed by this paper attempts to integrate interreligious dialogue as a form of postcolonial public theology in the framework of interreligious dialogue toward understanding the conflict in Marawi. In the wake of the devaluation of the religious voice in the public arena, there are pragmatic as well as theological reasons for the religions to join together as a common voice through shared humanity. This was the kind of thinking that gave rise to the Chicago Declaration of the Parliament of the World’s Religions (1993) in its formulation of a global ethic on the basis of the spiritual and ethical resources of the religious traditions. The document pleaded for commitment to a new world culture consisting of nonviolence and respect for life solidarity and a just economic order tolerance and a life of truthfulness equal rights and partnership between men and women. Interreligious dialogue in this paradigm includes the dimensions of both knowing and acting, individual and collective, particular and universal, and both body and soul. In Marawi, Philippines, many insights and visions can be construed in a form of public theology.

The proposed framework for using small groups can be relevant and useful for those responsible for formulating and choosing strategy (leaders, scholars and activists) of different Islamic movements. Those who take an interest in inexpensively expanding the reach of their intellectual and spiritual offering as well as for local mosque and institutional leaders who find that the time and energy/manpower and economic resources of their communities are almost always limited may find that the utilization of small Muslim groups can provide a much needed expansion of possibilities for the Muslim community (Argon, 2009). The aims of togetherness, dialogue and understanding may thus become tools for domesticating and mainstreaming the Muslims and Christians. Public Theology and dialogue could be, first of all, seen as ways to nurture the common secular public space that is a key structure of the modern liberal secular state (Fraser, 1995). The aim of such space is to keep the citizens in peace, maintain cohesion and prevent
fragmentation and open confrontations (Ahmed, 2012) This research hopes to give a fresh understanding of IRD towards fruitful theological dialogue between Christians and Muslims. It emphasized that dialogue does not mean glossing over real differences but, rather, engaging in a process in which participants may acquire new respect for the faith of others and new insight into their own faith towards shaping a better world.

5. **ACKNOWLEDGEMENT**

The researcher would like to thank the respondents of this research, the Theology and Religious education Department and De La Salle University-Manila Philippines for the funding.

6. **REFERENCES**


Art, Language and Culture for the Better World: A Hermeneutical Analysis

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ABSTRACT
In this paper I will briefly discuss hermeneutics, generally a subject for interpretation and understanding both linguistic and non-linguistic expressions such as art, philosophy and language and the clarity it promotes along with philosophy of language. Hence, this concerns the arguments that cover the affairs of culture, language and art in shaping a better world. The idea promotes better understanding and interpretation, which focuses on language and culture along with art and aesthetics. This may eliminate misunderstanding, stereotyping, disrespect of culture, disregarded agreement and value each and everyone’s ideologies, belief and culture embodied through language, art and aesthetics. Through philosophical hermeneutics and the hermeneutical aesthetic theory, the paper will stress the importance of language better understood focal to its historicity with culture and art that transcends meaning in different forms. The discussion also promotes that language, art and aesthetics as hermeneutic experience. In which case the shift makes hermeneutics no longer a conceived methodological or didactic aid for other discipline, but paved the way to questioning “How do we interpret?” “How do we understand?” and “How do we communicate at all?” By this way, although through some improvements and the progression persisting overtime, may still make culture, language and art transferable contexts through time. Therefore, the pivotal idea of shaping a better world in unity with diverse culture is realized through a better understanding and interpretation in language, art, aesthetics and culture.

1. INTRODUCTION

When we talk about art, we speak of great painters that greatly influenced their time. When we talk about culture, we speak of distinctive practice that defines a group of people. When we speak about history, we continue to remember the efforts of the people that stand before us. We speak about language, we talk about diverse expression between people. Hence, such concepts play a better role in connecting diversity and relating a profound meaning of what the world is.

Understanding and interpretation is part of human way of thinking and existing, wherefore it shows the intelligibility of human beings. Man, generally interpret and understand things in the reality perceived and thought by the human mind. It is a phenomenon on how man thinks and practices his rationality. However, there are some who could merely understand what understanding is, likewise interpret what purely interpretation is. The world is composite with knowledge and ideas, whereby man as his "natural attitude" wanders and gradually seeks for truth out his "doubt" and "consciousness". This concerns greatly any affairs of interpretation; hence it is right that we relatively focus with its main concepts: art, language, culture and history. The effects of profoundly considering these concepts make it possible to the elimination of misinterpretation and misunderstanding especially with the diverse culture, language and history expressed through art.
Utilizing the nature of hermeneutical analysis not only as a theory but as a method, I intentionally applied the hermeneutic analysis over the anthropological dynamics, statements and discussions from some of my students revealing the intention of facing such concepts essential in eliminating the problem and the need for hermeneutical methodology to materialized the proper understanding and eventually turn it into praxis. However, to understand hermeneutics as a theory, method and praxis I will need to discuss hermeneutic circle which embodies of how I presented the problem with understanding and interpretation (part-whole relation) and eventually put these concepts of art, language and culture as a part-whole concepts into ‘parts’ problems.

Hermeneutics and Social Sciences are considered as a ‘double hermeneutic’ process. As Giddens would try to consider it, ‘a mutual interpretative interplay between social science and those whose activities compose its subject matter”. Though our concepts are considered part of the sociological and anthropological discussion, I intended to support Dr. Felice Aldeo’s claim of hermeneutics as a research method and Gadamer’s humanistic concepts, not only I found out that hermeneutical theory may help us in interpreting and understanding the relations of data into the interplay it subject as a theory but also sees it as a praxis into realizing which seems to be a more important goal to consider.

I will be pointing out the essentiality of the process which may overturn the main objective of the part-whole relation into which classify the process of interpretation. In our case from my discussions, ontological classification is quite far yet since it requires being praxis to inhibit. This would greatly affect the conception to our main concepts: art, history, culture, and language.

Therefore, Hermeneutics is merely concern on the concepts subjected in understanding and interpretation. It is because humans understand and interprets language every time we engaged upon it. Language is everything in this world as it proposes. Since human writes with language, and speaks with language, every communication is engaged with language, as H.G. Gadamer says, "Language is the fundamental mode of operation of our being-in-the-world and all-embracing form of the constitution of the world." People cannot operate the world without language. Language may be considered everything in contrast with wisdom and rationality of man.

Hermeneutics is merely the phenomenon of understanding which brought man into what he must really understand and comprehend. Hermeneutics is the way to correct interpretation and it is said to be the science of all linguistic understanding. It is because hermeneutics was conceived as "art" and of understanding as for Schleiermacher's pre-conception about hermeneutics as a "science" or "art of understanding". It sees that hermeneutics was that of truly a guiding science for understanding. For Hans-Georg Gadamer, hermeneutical understanding was to go beyond the rules and hermeneutical systems, but of a science which describes understanding in all dialogic. In the concepts such as art we tend to be dialogic in such way we decipher the message it relays to us, in history as we transcend through time making sense of the context at present, in culture we try to understand the diversified action distinctively defining a group of people. Hence, through such concepts in the lens of hermeneutical analysis we may be able to make a closer look and reveal things that we may consider in making a better world.

2. METHODS
Hermeneutics
To subject these important concepts (art, language, culture, and history) into understanding and interpretation. I will need to briefly discuss the important concepts about hermeneutics and make a point to establish our intention of it as our method into the analysis of the said concepts.

The emergence of the argument about hermeneutics which is certainly not a common word to understand, in which case is also not usually used in relation with different disciplines certainly posits all the relation with the problem of interpretation. The word *hermeneutics* originated from the greek *hermeneuein*, *hermeneutica* and related to the mythological character ‘Hermes’ (Palmer, 1969). The main idea of hermeneutics posits the relation of ‘interpretation’ itself that leads to which understand comes from. While Palmer would put hermeneutics, ‘as the art of understanding and of textual exegesis, does stand only under the sign of Hermes’ (Schimdt, 2006).

In the discussions, hermeneutics as a philosophical method, a theory and practice of interpretation, and “a praxis” to understand what is distant in time and culture. (Shapiro and Sica, 1988) Hence, it supports the understanding mainly of our important concepts and subject them into a deeper understanding and interpretation.

Philosophical hermeneutics opens a “wider horizon of a hermeneutical dimension in which sense it shows its fundamental significance for our entire understanding of the world in various forms: from interhuman communication to manipulation of society; from personal experience by the individual society to the way which he encounters the society; and from tradition as it is built of religion, art, history and philosophy.” (Gadamer, trans Palmer, 1967)

Hermeneutics, in its discussion would always encounter the hermeneutical circle. I may not say it is a problem for hermeneutics, but rather it may be considered as a phenomenon in the process of understanding and interpretation. ‘Hermeutical Circle’ implies that the process of interpretation in which meaning could only be derived and come upon if parts can be understood from an understanding of the whole, but the whole can only be understood from an understanding of the parts. Example of which is when reading such sentences which has an important word which you cannot understand. You will not get the real meaning of the text if you do not understand the definition of the word itself. This is helpful in the affairs of understanding and interpretation. However, what we are proposing in here is that hermeneutical circle is not the only structure or methodology that understanding and interpretation would be; hence we should not limit ourselves to the horizon of the circle. Such are the concepts art, language, history and culture. In our discussions, the students experienced viewing an art, relating it to figure one should have the first grasp in the process of interpretation according to ‘hermeneutical circle’. The students explained the art concerning its attributes (color, style, patterns, and figures) hence; the first grasps do not deal with the ‘meaning’ or ‘giving meaning’ but appeal to the senses and interpreted according to what the object represents.

The art viewed is entitled “Hapag-Kainan” by Joey Velasco, who considered himself a ‘heartist’ (accurate to our hermeneutic experience), his style focuses on religious character (Jesus Christ) in a different setting (particularly social problems in the Philippines). The students considered his style religious in these reasons: “Philippines is a catholic country” therefore the artist is quite conservative considering the religiosity of the character. “The artist is a Filipino”, which mainly points out the societal issues concerning the illustrations. “The character goes beyond his space”, which is explained that Jesus Christ is brought to the Filipino people. The statements given by the children are one way of pointing the process where ‘inspection of the detail’ is done by the students, it follows the ‘global inspection’ where the students see a different character out of the societal sphere, and lastly a ‘deeper understanding’ pointed out in the statements where religiosity transcends from culture, history, and art.
3. RESULTS AND DISCUSSION

Hermeneutics and Universality

Hermeneutics subjects us into the problem of the alienation of aesthetic consciousness and the historical consciousness, both play a role in man’s understanding not only himself but of the society. This is vital to the explanation on how art can relate and impose itself to man and be able to contribute in making a better world. Thus, if when I say aesthetic consciousness, it explains the undeniable affirmation or negative definition of our relation when we experience any artistic form. (Gadamer, 1966)

Gadamer in this case related our immanent relation to art with the culture and religion of ancient Greece, we all know greek civilization really flourished and during that time their religion is expressed divine in the works of art. We can compare this during renaissance where art seems to greatly influence defining the ideologies and conventions during that time. Hence, art, language and culture has this capability of undeniable influence that moves the society into defining its identity through time. Transcending through time is history that defines us to what we are. Such categories may be understood directly and if applied appears to have a more emancipating influence to people.

The Composition of Experience and of Hermeneutical Experience Applied in Art, Culture, History, and Language

Through this we may classify the concept as a hermeneutical experience and the critic against the rejection of the “historicality of the inner experience”, for which we understand that our concepts if founded through this idea may contribute to a better understanding and may inhibit a practice to see them in this manner and not objected and confine only to their definition.

Hans-Georg Gadamer, in his examination of the hermeneutical experience; he then began to criticize it by the dominating concept about the experience itself, more likely the usual concept of it. Gadamer means that man today defines experience, through scientific knowledge and do not pay much attention on the “historicality of the inner experience”. By defining experience on that situation, man unconsciously fulfills and accomplishes the goal of sciences. This is so “to objectify experience that no kind of historical moment clings to it”. Because of the rigorous methodology, the scientific method used, takes out the object from its “historicality” and suits it to what the method demands it to be structured. Citing to Gadamer’s first discussion of his main work, Warheit and Methode, discusses the four humanistic concepts which Gadamer thought. In this four-humanistic concept there entails the term, bildung, that has a latin equivalent, formatio. In bildung there is an entire history involved. It said in his book that “bildung introduces us to the circle of historical ideas”. However, Gadamer negates the objectification and varication of science, which is its nature. This citation evidently shows the notion of Gadamer about the experience defending the elimination of historicality in the method of science. Therefore, now we could arrive in the experience which is not attached to the sciences, “the very definition of experience, this excludes the data of the science and the data of these sciences from itself.”

I do not reject the method of science, it is immanent that the method of science is what brings us through progression (digital era, technological era and futuristic ideology), however through more of this method it also brings us into objectivity of all things, hence, the elimination of ‘historicality’ which allows us to go back to the things in themselves and not only it suggests this result but also helps us understand fully such concepts without other implications. For instance, a cultural practice from a certain country may not look different to people who just witnessed it for the first time, if they enable themselves to subject the situation as a hermeneutic experience. Instead of having misunderstood such practices, tradition, and history (not that I generally subject the situation to be misunderstood) people who are alienated from it
may subject themselves and see a different perspective that allows to appreciate more of this and eliminate the alienation from the experience. This is applicable too with art to which afterwards I will be explaining the hermeneutical aesthetic theory that may support our claims on the importance of the implication of art.

This notion suggests that in the concept of experience it placed the dialectical and historical concept, wherein it is not merely a stream of perception as it is critiqued, instead but an event that personally experiences and encountered by man. In relation with cultural tradition, art implications, historical context and language interpretation.

H.G. Gadamer stated in his book, that it is Hegel who is important, and who is responsible of the testifying to the dialectical element in experience. On Hegel’s definition and notion of experience, it is said that we cannot have the experience twice. Gadamer’s says that the part of the nature of experience is to be continually confirmed as time pass by. It affirms that if experience an experience, it is being grasped and known what is previously we didn’t expect for we experienced it and now we can expect on it. Now man, as an “experienced” is becoming aware of his experience; man is truly being “experienced”. Now Gadamer’s notion of experience refers to a non-objectified concept of experience.

Experience suggests the pain of growth and new understanding for by experiencing something we can understand such things and learn from what we experience, it is full of disappointment and painfulness. Experience says Gadamer:

“Experience is a matter of multisided disillusionment based on expectation; only in this way is experience acquired. The fact that experience is pre-eminently painful and unpleasant does not really color experience black; it lets us see into the inner nature of experience. “

The darkness and painfulness are built-in to experience, because man’s historical existence presents the partiality of negativity that is being unravelled experience.

By these factors, Gadamer rely to the Greek tragedy and to the Aeschylean formula patheimathos, which means that “through suffering learn”. This merely means that in every pain, sufferings and brokenness of man, one learns and had to know the boundaries of human existence itself. It is the “experienced” man who knows every limit of his own anticipation and all the interruption in every human plan. Thus, this shows that the experience of man is the experience of man as finite, for man has his own limitations. If these factors were considered (being finite or having the realization of the man as finitude) in any way man as an “experienced” man is open to new experiences.

This applies greatly with our concept of history, culture and tradition. The neglect between these concept is the same neglect with respect to the human nature, that history plays a great part to what and how the people act in the present. If we alienate ourselves to it, then we neglect the true nature of man and neglect experiences that makes up man being man and the society it conforms with. Hence, through this ‘experienced man’ we subject history and culture where art and language is subsumed and can develop and progress. Therefore, I do not fully give the credit the progression of the world into the theory alone but in making the better world it’s contribution is evident.

In the book “Truth and Method” Gadamer said:

“Real experience is that whereby man becomes aware of his finiteness. In it are discovered the limits of the power and the self-knowledge of his planning reason. The idea that everything and that everything somehow return proves to be an illusion.”

The person who is “experienced” and situated” and acts in history knows that in experiencing nothing returns; Gadamer says that genuine experience is the experience of one’s own historicity. Now having the
general structure or system of experience we will have to arrive seeking out the hermeneutical experience in that of general of experience.

Hermeneutical experience is merely concerned with tradition, but tradition is not merely that governs us; it is language. The language that expresses the Thou. Thou isn’t objectified, but rather it relates itself to us. This doesn’t mean that what is on tradition merely speaks of the opinion of one person, which is a Thou. The relation to the Thou and the meaning of experience which is present in the relation teaches us something in the Hermeneutical experience. For it is said that tradition is a genuine partner in dialogue. Whereby it evidently shows that man is enjoined in it and that, as does too with the I and the Thou.

By this Gadamer claims that in the I and Thou relationship, represents the text as the thou. Wherein it is explained further that the text as the thou, the text is not merely an object but as a subject. The text must be allowed to speak, the reader being open to it as a subject rather than as an object. Now in that I and Thou relation and structure describe the authentic openness of subject to subject about the historically operative consciousness.

This evidently show that the I and Thou relation suggests the relationship with a dialogue which is merely dialectic.” The dialectical structure of experience generally, and of hermeneutical experience, reflects itself in the question-answer structure of all true dialogue”. Yet is necessary that in conceiving it into a person-person terms, instead of person-matter or subject-matter.

Through this, it opens the avenue for understanding our main concepts, art, culture, history and language into a dialectic nature of interpretation and hence develop a greater effect in eradicating the problem of not only neglecting it but also giving importance to it.

Hermeneutic Interpretation of other Cultural Tradition

In the book “Hermeneutics, Tradition and Contemporary Change by George McLean, he stated:

“We must now see how hermeneutics can help toward a better understanding of the structure of communication between peoples.” (McLean, 2003) He highlighted the problem within of tradition, history where we know topics like culture is incorporated, is not its content but its relation to present and its application in our days as praxis. In relation to the modern action, he claimed that dynamism is what divides us and “thus inhibit living our tradition in a pluralistic context.”

Through hermeneutics, we must see the light that what forged our beliefs is the concept of understanding these concepts over time. “It remains now to look at how, conscious of our own tradition, we can live faithfully and fruitfully with others in a time of intensifying intercultural engagement and cultural pluralism…for the greater be that tradition and the more beautiful, successful and satisfying the life it engenders..”(McLean, 2003)

Art in the Hermeneutical Aesthetic Theory

Finally, I make a claim with the value of art. By hermeneutical method, I subject art and its place in the experience of the world. Gadamer stresses the value of art in his aesthetic theory and lay claims to the significance of art and makes the philosophical approach flexible in different art and its forms (Davy, 2016). I descriptively applied Gadamer’s hermeneutical theory and applied its implications to support our claim in making a better world. This would also imply some insinuations from some Filipino artists explicating some influences from the art they made.
• “Aesthetics is not the study of specific types of subjective pleasures derived from art. It is a study of what objectively informs our subjective awareness of art.”

• “Hermeneutical aesthetics seeks to break through the pleasurable distractions of aesthetic consciousness in order to disclose the cultural and linguistic realities that manifest themselves within it.”

In my example of Joey Velasco’s style in making a statement to his artworks, wherein he transcends in presenting characters from his art through disclosing the cultural and linguistic reality by inserting the character of Jesus Christ inside the social issues that the country Philippines have. Hence, art’s intention by this circumstance is not through aesthetics consciousness alone but also through making enough significance with the manifestations revealed in its form. “The end of hermeneutical aesthetics is not to arrive at a concept of art but to deepen our experience of art. In hermeneutical aesthetics, theory is deployed to deepen contemplation of artworks rather than to categorise their nature.” This empowers art into making an important value greater than its aesthetic expression through symmetry and audacity of colors, lines and figures but through the dialectic nature it conveys to the people who experience it. Lastly, I quote this statement from Horace, “A picture is a poem without words.”

4. CONCLUSION

Making a better world does not vary all the time with the quantifiable actions that the society contributes in successfully attaining it. But it also relies with the greater contribution of what pushes us to do those actions, hence, the concepts given such as art, culture, history and language, plays an important role that initiates people into a better understanding of the world. Such problems that the world faces are immanent. I do not neglect the imposing effects of these problems rather I wanted to contribute to some consideration that may thrust our intentions into eventual reality that it is probable to abolish it and it is also possible to make a world a better place. Through imparting these concepts and the

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“Good Fences Make Good Neighbors: Revisiting the Doctrine of Separation of Church and State in the Policy Making of the Philippines”

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ABSTRACT

“Good fences make good neighbors.” The 1987 Philippine Constitution unequivocally provides that “the separation of Church and State shall be inviolable.” The idea is to delineate the boundaries between the two institutions and thus avoid encroachment by one against the other because of a misunderstanding of the limits of their respective exclusive jurisdiction. The doctrine cuts both ways. It is not only State that is prohibited from interfering in purely ecclesiastical affairs, but the Church is likewise barred from meddling in purely secular matter. But the observation of Joel Migdal in his Theory of State in Society distinctly explained this social phenomenon of interloping of State and Church to each other. However, this maxim represents a normative demand rather than empirical reality. This paper focuses on how the Church, influences the political actors and the policy making of the State since the adaption of the 1987 Constitution and how the process of enactment, relationship of political actors and church leaders and the struggle for social control directly affect the quality of policies being enacted in the Philippines.

1. INTRODUCTION

“I challenge you now. I challenge the Catholic Church. You all smell bad, corruption and all.” In a speech, President Rodrigo Duterte attacked the priest and bishops in the Philippines by accusing them of corruption, womanizing and other excesses. The President went off on the Catholic Church leaders after he defended his war against illegal drugs. Ever since the start of Duterte’s presidency, some bishops and lay Catholic groups have been critical of his leadership style and legislative agenda. In the recently held World Congress of Mercy, some bishops publicly criticized the government’s strategy in curbing the drug problem. They have asked for a proper investigation of the deaths due to the crackdown on drug use and for respect for the rights of every person, including those suspected users and pushers. The Catholic Bishops’ Conference of the Philippines (CBCP) even held its plenary assembly country’s current sociopolitical landscape including the Duterte’s advocacy of federalism through charter change. A familiar scene in the political landscape of the Philippines since the end of the authoritarian rule in 1986. Although the present Constitution explicitly provides the concept of “separation of Church and State,” the Church remains influential in politics and policy formulation in the Philippines.

The Philippines is a truly unique nation. In a region where Islam, Buddhism and Hinduism are dominant, it is a Catholic-majority society. It was the sole American colony in Asia, with one of the oldest traditions of democratic competition. (Heydarian, 2017) With a population of 92.09 million people, the latest census conducted by Philippines Statistics Authority in October 2015 provides that the population is divided among the following religions. The predominantly Roman Catholic population is spread over most of the archipelago with 80.58 percent of the whole population. The Islam, which form the largest non-Christian group have 5.57 percent of the population. The other Christian groups, specifically the Protestants, the Iglesia ni Kristo, and the Philippine Independence Church, comprise another 13.25 percent of the population.
Since 1899, religious freedom in the Philippines has been a key facet of its various Constitutions. (Pedro, 2008) Cornelio observed that religious freedom in the Philippines deals with the freedom to exercise religious belief and practice and the separation of Church and State. Even during the American occupation and the Martial Law of Ferdinand Marcos, these provisions were asserted in different ways. To this day, they serve as the cornerstone of the legal understanding of religious freedom in the Philippines. (Cornelio, 2010)

The immediate context of religious freedom in the Philippines, however, renders these provisions difficult to uphold consistently. For one, the Catholic Church remains influential to politics and policy formulation (Shirley 2004; Moreno 2006; Leviste 2011). While it is true that Court decisions and laws are constructed using strictly secular reasoning (Thio 2009), the culture in which democracy and the rule of law operate in the Philippines is widely religious. This explains why the Catholic Church has occupied a pivotal role during the People Power Revolution in 1986 and in the elections that have taken place since (Rafael 2006). Such Catholic influence draws from both the history of the Philippines as a Spanish colony under clerical rule and the fact that Catholicism remains the predominant religion among Filipinos.

Second, as will be recounted below, the religious landscape is increasingly diverse as brought about by migration and the growing public presence of other religious groups. Other non-Catholic religious groups, for example, are becoming politically involved as well by fielding their own candidates (Jamon and Mirandilla 2007; Pangalangan 2008).

As the saying goes, “strong fences make good neighbors.” Section 6 of Article II of the 1987 Constitution expressly provides that “the separation of Church and State shall be inviolable.” It is a reproduction of Article XV, Section 15 of the 1973 Constitution. The separation of Church and State was originally expressed in the bill of rights providing that “no law shall be made respecting an establishment of religion or prohibiting the free exercise thereof.”

The late Supreme Court Justice Isagani Cruz explained the rationale of this provision, saying that the idea is to delineate the boundaries between the two institutions and thus avoid encroachment by one against the other because of a misunderstanding of the limits of their respective exclusive jurisdiction.

The doctrine cuts both ways. It is not only State that is prohibited from interfering in purely ecclesiastical affairs, but the Church is likewise barred from meddling in purely secular matter. A union of Church and State, “tends to destroy government and to degrade religion.” (Cruz, 2002). But it must be noted that the wall of separation is not of a “wall of hostility”. As Justice Jose P. Laurel said, “the influence of religion is deeply felt and highly appreciated.” The State should recognize the beneficent influence of religion in the enrichment of nation’s life.

<table>
<thead>
<tr>
<th>Religious Group</th>
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<td>Roman Catholic, including Catholic Charismatic</td>
<td>80.58</td>
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<tr>
<td>Protestant</td>
<td>10.8</td>
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<tr>
<td>Islam</td>
<td>5.57</td>
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<td>Iglesia Ni Cristo</td>
<td>2.45</td>
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Prof. Raul Pangalangan argued that there are different models of this doctrine. The first and most predominant model is the strict separation of church and state, enshrined in all the Constitutions adopted in the Philippines including the Malolos Constitution of 1899 that was adopted by the revolutionary government upon gaining independence from Spain, the —organic acts adopted during the period of American colonialism, and the three constitutions that have governed the country since its independence from the United States.

The Supreme Court made its strongest statement on the separation of church and state in 1978 in Pamil v. Teleron, in which the Court could not muster enough votes to strike down a 1917 rule that barred ecclesiastics from holding public office – whether appointive or elective—in municipal governments. This rule was clearly incompatible with the —no religious test clause yet the Court warned about the —diabolical union of church and state that was the cornerstone of the prohibition, tracing its provenance back to the revolution for independence against Spain in 1896. (Pangalangan, 2010)

Given this realities, two concerns need to have a scholarly discussion with regards to the religious freedom in the Philippines: one, its legal understanding as enshrined in the Constitution, and the dominance of the Catholic Church in Philippine political affairs. As will be seen below, much attention has been given to the latter.

Robert Wuthnow observed that the “relations between religious institutions and the reigning political powers have undergone dramatic change in recent years”. Orthodox religious communities, once thought to have bargained away their political souls, are now the sponsors of bold new opposition movements. These developments led to the policy makers and religious leaders to be more attentive to the interest of their religious constituencies. Wuthnow further argued that there are three theories have dominated most discussions of religion and politics namely, modernization theory, world-system theory and the critical theory.

Modernization theory suggests that "modern" societies can be distinguished from societies that are still “traditional" or undergoing development. The shift away from tradition made the modernization theorists observed the drastic negative impacts for religion. Since religion everywhere has played an integral role in traditional societies, the movement towards modernity, therefore made political leaders displace the authority of religious leaders and in other ways devalue the importance of traditional religious institution. Modernization theory has been applied most widely to societies in the Third World that have undergone rapid changes.

World System Theory proposed the idea that as the world has become increasingly interdependent, “no society moves by itself along some predetermined track from traditionalism to modernity.” The societies of the world interact with one another as parts of a global system. Applications of world-system theory to religious change have focused to a great extent on the ways in which short-term changes in the world-economy may affect the stability of religious institutions.

The Critical Theory presents a clearer perspective about religious movements that we see emerging in various parts of the world especially those in advanced industrial societies. It can be understood as “protests against the growing bureaucratization and monetization of the lifeworld.”, including Christian or Islamic fundamentalism. (Wuthnow, 1991) Wuthnow argued, citing the works of Habermas, that we are finally becoming aware of the threats that confront our quality of life, our sense of ourselves, and our natural environment. As a result, we see an increasing number of movements attempting to combat these threats. Habermas cited the various mystical and human potential groups that have arisen in opposition to the impersonality of modern life, the efforts mounted by established religious groups to advocate equality and social justice in the name of traditional or divine values, communal
experiments with the reshaping and redefinition of work, and special interest groups concerned with gender roles, the family, and environmental pollution. (Wuthnow, 1991)

Joel Migdal’s *Theory of State in Society* distinctly explained this social phenomenon of interloping of State and Church to each other. In the contemporary world, the state is the sole accepted model of political order. However, this maxim represents a normative demand rather than empirical reality. This demand stipulates that the state, as a central political organization within a given territory, should be the agency to set and enforce binding rules among its citizens.

The key point of Migdal’s model of state-society interaction is that, the state and social organizations continually compete for social control. The state, by its very nature, lays claim to the authority to regulate all social relations within its borders, thus pitting it against all social organizations that would resist this undertaking. The dominant authority determines who will make the rules pertaining to certain segments of the population. This may lead to a shift in the available strategies of survival for the affected individuals.

From the perspective of the state, the struggle for social control takes place at the macro as well as the micro level. At the national level, state leaders generally have an interest in a strong and functioning state. However, there is a dilemma inherent in this strategy: strengthening state agencies may help create autonomous power centers within the state structure which might end up turning against the state leadership. If there are many such agencies, this problem is less severe. However, if state power rests on only a few institutions, then these agencies can become vehicles for state leaders’ rivals in their drive to unseat the present leadership. In such cases, it becomes rational for the ruling regime to dismantle and weaken state structures, or to ally themselves with social organizations to gain access to their means of mobilization. However, if social control is highly fragmented, such an alliance is not a viable strategy. “Those societies with high fragmentation of social control among a mélange of social organizations and the consequent denial of mobilizational capabilities (centripetal forces) to state leaders have precipitated a particular political and administrative style in their states” which Migdal calls “the politics of survival”.

Following this framework, the Church and State, considered as a social organization would continue to compete for social control for its survival.

2. METHODS

“To compare is to be human.” (Landman, 2003) Explaining this social phenomenon of Church influencing the policy making of the State, a comparative method was used to analyse the struggle in the passage of two pertinent policies, namely Republic Act No. 1425 or also known as “An Act to Include in the Curricula of All Public and Private Schools, Colleges and Universities Courses On The Life, Works and Writings of Jose Rizal, Particularly His Novels *Noli Me Tangere* and *El Filibusterismo*, Authorizing the Printing and Distribution Thereof, and for Other Purposes. Act” and Republic Act No. 10354 also known as *The Responsible Parenthood and Reproductive Health Act of 2012* informally known as the Reproductive Health Law or RH Law.

On this particular policies, religious movements were made to question the constitutionality of this law. Notably, Church leaders pressured political leaders, specifically the legislators to stop the enactment of these policies. Comprise were made to facilitate the interest of the Church and lobbying were done to push these reforms. Hence, it will be known these pressures led to different outcomes.
3. RESULTS AND DISCUSSION:

The Story of Rizal Law

In 1950’s, Senator Claro M. Resto and then Chairman of Education Committee Chairman, Senator Jose P. Laurel submitted a bill calling for a return of values enunciated by Filipino heroes like Dr. Jose Rizal. The original bill made it obligatory for college and university students to study the life and works of Rizal. But the issuance of the bill was not welcomed by all sectors. The Catholic Church in particular assailed that Rizal Law as “Anti Church” because it forced the students to read Rizal work’s like Noli Me Tangere and El Filiusterismo.

The Church presented arguments supporting their claim that the said policy will prejudice the faith of the Filipino, that the “compulsory” teaching of the unexpurgated versions of Rizal’s Noli and El Fili, a teacher would have the tendency to discuss—or worse, to criticize—certain Church doctrines. The inevitable criticism of Church doctrines might lead to the jeopardy of the faith of people.

Church made use of lobbyists as well as priest in opposing the Rizal Bill. Among them were Catholic organizations such as Accion Catolico (Catholic Action), the Congregation of the Mission, the Knights of Columbus and Catholic Teacher’s Guild. Priests were also present during the Senate hearings. This was a clear interference of the church on the policy making of the State.

Seminars were held across the country to opposed the Bill. In one of the seminar, one of the oppositors named Fr. Jesus Cavanna commented that Rizal’s novel belonged to the past and it would be harmful to read them because it presented a false picture of the conditions of the country at the time.

Then Sen. Francisco “Soc” Rodrigo, a known oppositor of the bill, opposed due to the use of compulsion. He claimed that the reading of the unexpurgated versions of Rizal’s novels is against the conscience of the Catholics. He believed that nationalism and patriotism are important and must be promoted, yet promoting them should not be done at the risk of endangering the harmony between the Church and the state. Sen. Rodrigo viewed the measures as unjust and unwise because of the use of compulsion that might put the Church in an awkward situation since religious issues have always been considered as “delicate matters”.

But what was the real issue in the arguments expressed in the passage of the bill? It was the use of “compulsion” in the attainment of the objectives of bills. Interesting to note, however, that nobody among those who opposed the passage of the bills desecrated the image of Jose Rizal—neither that there was one who said that he did not deserve to be called as our national hero.

To resolve the issues, amendments of the bills were respectively proposed in both houses of Congress. The word “compulsory” was deleted and replaced with the phrase “to include”. It met strict scrutiny from those who opposed the original versions as favorably accepted by the lawmakers.

The law accommodated the objections of the Catholic Church. The accommodation can be seen in the second paragraph of Section 1 allowing students to seek exemption from reading Rizal’s works for religious reasons. To the opposition of the bill, it was a complete victory but its proponents felt satisfied at least they achieved something. The law, however, still require the reading of the unexpurgated versions of Rizal’s novel and the law also provided the funding of publication of Rizal’s work and their distribution.

The Culture of Death: Family Planning and the Church from Aquino to Aquino
Apprehensions about the government's family planning program launched in 1970 were made during the regime of the late dictator Ferdinand Marcos and it was only lifted in 1986 with the election of Corazon Aquino, a devout Catholic. It is publicly known that President Aquino attained power with the backing of the influential CBCP and who was close personally to Cardinal Sin, an influential figure in the ouster of Marcos. The harmony between Aquino and the Catholic hierarchy on family planning was reflected in the articles on the family in the 1987 Constitution.

Aquino reaffirmed her pro-natal stance by emphasizing family well-being, rather than family planning, in her 1988 State of the Nation address while essentially agreeing with church leaders who advocated government programs to reform unjust social structures, rather than population control, as the best way to alleviate poverty. Youngblood noted that the church was reassured by the appointment of Mita Pardo de Tavera as secretary of social welfare and chair of the Population Commission (PopCorn). Tavera soused the idea that a large population is not the problem, he was also responsible for the stagnation of the family planning program after 1986. The number of personnel promoting family planning dropped from ten thousand during the Marcos years to two hundred under Aquino. (Youngblood, 1998)

Until 1990, following the suspension in January 1989 of population planning funds from the U.S. Agency for International Development (AID), because of the disarray of the Philippine program, the Aquino administration initiated steps to resuscitate the moribund program. The revitalized program included artificial methods of birth control, but not abortion, and it stressed "family planning as a health service rather than a means to reduce population.

Government and Catholic Church officials met to discuss the 1990-1994 Philippine family planning program. The CBCP published a pastoral letter disassociating the church and "all who wish to remain faithful to Gospel values" from the government's population program. While expressing concern for the less-fortunate, the bishops asked the poor "to practice the twin virtues of prudence and generosity in the natural regulation of births" because, they promised, "God never abandons those who are heroic and who depend on him for all things." They also characterized the Philippine family planning program as part of a "worldwide drive that undermines the value of life," which "is evil," and they warned government workers "not to allow yourselves to be used as counter witness to the Gospel" by distributing contraceptives or offering advice on sterilization. Bishop Varela, head of the CBCP's Commission on Family Life, likewise articulated concern about the potential for coercion by government officials eager to increase the number of acceptors of non-natural birth control methods. (Youngblood, 1998)

Unlike Aquino, Fidel Ramos, a Protestant enjoyed no honeymoon with the Catholic Church upon election as president in May 1992. In fact, Cardinal Sin made no secret about preferring other candidates. Ramos as a renegade who "helped Marcos put up the structure of dictatorship"; and said the country did not "need a president who continuously fights," a thinly veiled reference to Ramos. The cardinal's Easter Sunday pastoral letter enjoined the electorate to "reject candidates who oppressed and plundered" during the Marcos period and "who have opposed or, if elected, will oppose Catholic principles in their public acts." And in a pre-election homily at Christ the King Seminary in Quezon City, he asked voters to "elect a president and a vice president who, will put an end to the active promotion of mechanical means and artificial devices of birth control," a clear injunction to vote for Mitra and Fernan, who, if elected president and vice president respectively, were expected to halt the government's birth control program. (Youngblood, 1998)

Unlike Cardinal Sin, CBCP remained officially neutral in the May 1992 election campaign. The bishops' January 1992 pastoral letter on the election urged the selection of candidates committed to public
service and warned against vote-buying. The CBCP also indicated approval of electoral watchdog groups such as the Parish Pastoral Council for Responsible Voting, the People's Election Watch, and the Citizens' Movement for Peaceful Elections. Most bishops viewed the 1992 election in terms of the Roman Catholic Church's long-term objectives of developing responsible citizens and educated voters. Similar themes were expressed in the NCCP's election statement, "Spirit of Truth, Set Us Free."

Within weeks of the inauguration, Ramos clashed with Roman Catholic "laws of God" over government family planning policy. First, Ramos stated that the achievement of a per capita income of $1,000 a year by 1998 required a population growth rate below 2 percent. Second, he appointed Juan Flavier, a medical doctor with thirty years of experience in rural practice and an advocate of family planning, as secretary of the Department of Health. Third, Ramos and Flavier established "freedom of choice" as the cornerstone of the government's family planning program, making available to couples wishing to limit family size a range of birth control methods, including artificial methods such as pills, IUD, and sterilization. The Catholic bishops, only recognizing natural birth control methods, in accordance with Rome's position, responded by declaring "total war" on the government's program. In contrast, the National Council of Churches of the Philippines and the Iglesia ni Cristo, as well as ecumenical organizations such as Kilosbayan, issued statements supporting Ramos's family planning policies.

Animosity between the government and the Catholic bishops intensified in early 1993 over the use of prophylactics in fighting the spread of HIV. Ramos's endorsement of condoms prompted another critical pastoral letter from the CBCP. The bishops maintained that the president's policy was "simple and evasive" because it skirted "the heart of the solution, namely the formation of authentic sexual values." Moreover, they saw Ramos's and Flavier's advocacy of prophylactics to prevent HIV as "part of a drive to promote the acceptability of condom use for contraception" that would inevitably result in increased "promiscuity and sexual permissiveness." Cardinal Sin responded by denouncing the "enemies of the Filipino family" at a "Save the Child, Save the Family" rally he staged in Manila's Rizal Park, reportedly attended by a half-million pro-life supporters.

In July 1993, the CBCP issued a "blistering pastoral letter" on the government's family planning program, asserting that "the blatant promotion of direct contraception and direct sterilization which separate the two aspects of the conjugal act-the expression of love and openness to the transmission of life-is contrary to the will of God." The bishops linked contraception to the breakdown of the family, sexual promiscuity, and the spread of sexually transmitted diseases, and they accused the Ramos government of "insensitivity to the sentiments of the majority Church whose ethical principles prohibit" artificial birth control methods. Just as they had done in 1990, the CBCP as well as individual bishops and priests again called on Catholic health workers to refuse to implement government family planning practices violative of Church beliefs.

Differences between the Ramos administration and the Roman Catholic Church on family planning spilled into the May 1995 congressional and local elections. The CBCP issued a pastoral letter in January enjoining Catholics to vote for candidates who are "pro-God, pro-life and pro-family," and promoted the reactivation of citizen's groups to mobilize the vote, Cardinal Sin warned that the pre-election coalition of Ramos's Lakas-NUCD (National Union of Christian Democrats) and Laban ("Fight"), the country's two strongest political parties, was a move toward keeping Ramos in power. He derided the alliance as "a marriage of non-virgins," saying a democracy needed a credible opposition, and along with other church leaders, encouraged candidates who met the criteria of the CBCP's January endorsement of eight senatorial candidates by the Council of Laity of the Philippines, the largest Catholic lay organization, drew only a mild rebuke from the CBCP. The candidacy of former secretary Flavier,
however, was targeted for defeat. Although he won election, Flavier complained that opposition by church officials had caused him to drop from a top position in the polls.

The Reproductive Health Law and the CBCP

There is no doubt that the population of the Philippines has continuously grown at an alarming rate for the past several decades. The relevance of the Catholic Church in the issue of reproductive health begins with the prohibition of abortion. This is a widely controversial practice that is frequently influenced by the Church and other religious organizations. The resulting problem with prohibiting abortion in a country where such a population problem exists is that women who experience unwanted pregnancies sometimes resort to risky procedures that are dangerous to their health and warrant legal punishment if caught. To make matters worse, religious beliefs imposed by the Church make women feel guilt-ridden for the sins of having abortions (Guttmacher Institute, 2009).

The Catholic Church establishes a society that is unable to control its growth rates based on law and religious faith. It claims that the Filipino culture values having large families, but in reality large families are the result of inaccessible methods of family planning. If the suffering portion of the population had reliable, easy access to contraceptives, the growth rate would decline and there would be a lesser burden on poverty.

Until the time President Joseph Estrada where the Philippine Legislators' Committee on Population and Development (PLCPD) traces the first step of the RH law to House Bill 8110 filed on August 16, 1999. It was the 11th Congress. The proposed “Integrated Population and Development Act of 1999” pushed for “universal access to reproductive health services, including family planning and sexual health.” Five solons filed the first bill and among them was the daughter of 15th Congress RH bill sponsor Albay Rep Edcel Lagman - Cielo Krisel Lagman-Luistro. The other four are Luwalhati Antonino, Carlos Cojuangco, Bellaflor Angara-Castillo, Nereus Acosta, and Edith Yotono-Villanueva. (Rappler, 2014)

Nothing came out of HB 8110. In the succeeding 12th Congress, Rep Bellaflor Angara filed a similar bill. HB 4110 was the first bill to be called the “RH bill.” The bill was refiled and refiled until it made progress in the 14th Congress. It reached the stage in the legislative process where the entire House could debate it in plenary. The national debate, the war, began. Lagman, Iloilo Rep Janette Garin, and Akbayan Rep Risa Hontiveros took the cudgels for the RH bill.

The CBCP made arguments throughout the processing of the most recent Reproductive Health Bill. One of its claims made to deny the Bill was that contraceptives provide “safe and satisfying sex” (Odchimar, 2010). Additional facts that are provided refer to the failure of contraceptives in the presence of sexually transmitted diseases, the carcinogenic element of contraceptives, and the liberal aspect of sex education programs. While these may or may

Introduced into the Fifteenth Congress was House Bill No. 101, which was an effort to establish reproductive health care for women (Gamir, 2010). It states that the right to reproductive health care is protected under the international human rights instruments such as the Universal Declaration of Human Rights and the International Covenant on Civil and Political Rights, the Women's Convention, the International Conference on Population and Development Program of Action, and the Fourth World Conference on Women Platform for Action, among others.

This Bill brings to light the realities of problems such as maternal mortality, family planning
implementation, abortion incidence, adolescent and youth health, access to information on reproductive health, and prevalence of HIV and AIDS

The success of the most recent filed Reproductive Health Bill was the result of constant deliberations of the poverty situation and increasing population. This fact and the increasing strains on resources convinced the government to pass the Bill. The Bill also contains the following: Sec. 2 “The State shall guarantee universal access to information and education, and safe, affordable, and quality reproductive health care services. The State likewise guarantees universal access to medically safe, legal, affordable and quality reproductive health care services, methods, devices, supplies and relevant information thereon.”

As expected, the Church made the statement that contraceptives would not solve the problem of poverty. This is indeed true, but it will help alleviate the excessive pressure on families that cannot earn enough to support their growing families. It also may not reduce poverty, but it may decrease the rate at which poverty increases. In slowing the effects of growing populations in poverty, the Reproductive Health Bill became the turning point in legislation that proves the separation of Church and State. Despite this loss, the Church is not dissuaded in other aspects of politics because it still holds reasonable leverage and exerts power in the economic sphere of the nation.

On August 6 2013, a day before the scheduled vote, President Benigno Aquino called all members of the House to a lunch meeting in Malacañang to appeal to them to vote in favor of terminating debates on the RH bill so it can proceed to the period of amendments. The war was just beginning to heat up and critics were successfully using parliamentary tactics to prevent the bill from further moving forward.

It was a surprise move but it wasn’t too difficult a request. Even the most rabid critics of the RH bill accommodated the President. Aquino called the House members to another meeting to Malacañang to appeal to them to finally put the RH bill to a vote. In spite all those efforts, it was a victory by only 9 votes -- 113 to 104. Among the LP members, 43 voted in favor and 26 voted against. The vote was split down the middle for coalition allies Nationalist People's Coalition (17-15 in favor) and Nacionalista Party (8-8). RH advocates celebrated the victory but also feared that the vote could change in the 3rd and final reading.

A different outcome was reflected during the 3rd reading vote, it was 133 -79, after Aquino certified it as urgent. The additional 20 votes is the difference between the 27 lawmakers who were absent in the second reading vote but showed up to cast yes votes in the 3rd reading vote and the 7 who previously voted yes but were absent in the final vote.

Liberal Party, the political party of President Aquino also worked harder on its members. The LP vote would change to 51 in favor and 15 against. Among those absent are key party leaders known to be anti-RH.

If there’s anyone who still doubts the power of the Catholic Church, the second reading vote in the House of Representatives is proof. As vigorously as the Aquino administration, the Catholic Church persevered to push its agenda. The bishops used all the tricks in the hat. Solons received SMS messages from their bishops, invitations to meetings, images of saints, and letters. Many of the solons were afraid. Whatever the surveys say on general support for the RH bill, some believed in the Catholic vote. Minority Leader Quezon Rep Danilo Suarez said there remains religious community leaders who will always follow what the Catholic Church says. That, he said, is the Catholic vote. The House minority bloc was a big loss to RH bill. Suarez and at least 7 other members who were originally RH bill co-authors later
withdrew their support.

Two reasons are being cited for the change of heart: RH bill sponsor Lagman’s tiff with Suarez over the House minority leadership position and the return of former President now Pampanga Rep Gloria Arroyo to the House after a months-long house arrest. She is known to be anti-RH. Church-goers themselves, other solons were afraid of the treatment they and their children would get from the bishops. After the bill was passed, pro-RH solons spoke of uncomfortable Christmas gatherings in the presence of their bishops.

RH advocates claim they always had the vote to pass the RH bill. But they acknowledged that they started losing votes since the anti-RH rally that CBCP organized in the People’s Power Monument in February 2011. In September, a Malacañang official mediated a meeting between the bishops and the House members to attempt a compromise bill.

At least three meetings were held in a hotel in Makati. Bishops actively contributed inputs to the RH bill. The result is the substitute bill that Gonzales presented to the plenary on November 26. In a funny twist of events, Lagman had to protect the bishops’ amendments against anti-RH solons who wanted some of them deleted. In spite the bishops’ inputs, the Church did not - could not - support the measure. Some of the bishops who sat down with the representatives showed up in the House gallery on voting day. But the efforts were not wasted. The cooperation shown by the bishops succeeded in persuading House members, who supported the measure The LP members worked on the senators to secure the necessary vote. But "test vote" happened when then Senate Juan Ponce Enrile proposed killer amendments and lost. In the end, the proponent of the RH Bill had a clear victor over its opponents and the Church.

4. CONCLUSION

Literatures have discussed the legal framework that mostly focused on the separation of Church and State. As far as the historical context is concerned, Catholic intervention was what the Framers were arguably protecting the State from the interference of the Church (Pangalangan 2008). Case studies cited above have focused on how the State has asserted the separation clause and the right of the individual to religious freedom. Ironically, however, the Catholic Church has actively participated in the political life of the Philippines (Shirley 2004). Youngblood’ seminal work, for example, has dealt with the role of the Catholic Church during the dictatorship of Marcos. The legal emphasis has overlooked the other aspect of religious freedom that focuses on individual right to exercise religious beliefs and practices. Rizal Law is a clear example of how the church can influence the quality of policies that enacted by the state. On the other hand, the passage of the RH Law during the Aquino Administration is a clear indication that the State can assert the doctrine of separation of Church and State. But the Church, as social institution will remain as the “conscience” and will continue to be the moral compass of the State.

5. ACKNOWLEDGEMENT

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SOCIO-PSYCHOLOGICAL PERSPECTIVES OF THE ILLEGAL DRUG
USERS BEFORE AND AFTER ENTERING BICUTAN TREATMENT AND
REHABILITATION CENTER, TAGUIG CITY, MANILA, PHILIPPINES

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ABSTRACT

In this modern complex world most of the people are under the influence of the heavy burden of stress that is brought by a series of adversities such as poverty, family difficulties, work problems and social hardships. As an escape to social realities, people try to run away from all of these misfortunes of life through the use of illegal drugs; thus, the number of the users rapidly increased in the Philippines in the recent years triggering the Duterte administration to implement ‘Oplan Tokhang’. This operation lead to stereotyping the users as ‘adik’ stimulating the victims to develop negative perspectives in life. Hence, it is timely to determine the socio-psychological perspectives of the illegal drug users before and after entering Bicutan Treatment and Rehabilitation Center (BTRC) in Taguig City, Philippines. It is imperative to conduct this study in order to know if the programs and activities of the center changed the backward perspective of the users. This quantitative-qualitative study employed purposive sampling in selecting the participants of the investigation. The selected interviewee were asked about nine significant questions which were validated by the experts. The questions revolved on kinds of illegal drugs used, socio-psychological perspectives of the users and the programs availed and activities they were engaged on the center. The qualitative data were interpreted using thematic analysis. On the other hand, the quantitative data were interpreted using descriptive statistical tools. Results of the current study indicated how the participants had altered views about life upon entering the center. It also revealed the community where the users are admitted in which they are free to avail programs that are beneficial for them. It was also evident how the users were able to adapt reality with the help of therapeutic therapy and individual counseling.

1. INTRODUCTION

According to a 2001 study by Choe on drinking, smoking and drug use among teenagers in Southeast Asia, illegal drug use is less common than drinking or smoking in the Philippines, but nevertheless still considered a concerning phenomenon. So much so that the 2016 national elections was won on an aggressive anti-illegal drugs platform by erstwhile Davao City Mayor Rodrigo Roa Duterte, known as a "loose cannon" (Heydarian, 2016).

The start of President Duterte’s term marked the beginning of a national war on drugs. Oplan Double Barrel, the Davao City police force’s anti-illegal drugs campaign, was adopted by the Philippine National Police (PNP) where lists of drug dealers and users, both public officials
and private individuals, based on information obtained from investigations and intelligence reports, are used as a basis for legitimate police operations (Reyes, 2016). This was in conjunction with Oplan Tokhang, derived from the Cebuano words-President Duterte’s first language-“toktok” (to knock) and “hangyo” (request), also pioneered by him, in which police forces round up drug users and/or pushers through lists compiled by barangay captains and other local politicians (Thompson, 2016). Both government campaigns have been met with much criticism from local and international watch groups for unnecessary violence and loss of life. President Duterte has repeatedly implied in public speeches that “drug addicts are not human and criminals have no place in the society” (Reyes, 2016). There were over 6,100 deaths linked to the war on drugs both from police operations and vigilante-style killings in the period from Duterte’s ascension to presidency in July 2016 to the end of December 2016 (Reyes, 2016).

The other, less public face of the war on drugs is the rehabilitation centers. In a 2017 report, the Dangerous Drugs Board states that the number of facility-based admitted drug users in the Philippines increased from 2,744 in 2013 to 6,049 in 2016, across 48 licensed drug abuse and rehabilitation centers (CNN Philippines, 2017) operating nationwide. These rehabilitation centers, such as the Department of Health Treatment and Rehabilitation Center (DOH TRC) in Bicutan, Taguig City, uphold the government campaign “All for Health towards Health for All: Philippine Health Agenda for 2016-2022.”

The DOH TRC – Bicutan started out as the Drug Abuse Rehabilitation Network Inc. (DARN), founded by the Constabulary Anti-Narcotics Unit (CANU) pursuant to Sections 30, 31, and 32, Article VI of RA 6425, otherwise known as the Dangerous Drugs Law of 1972, on November 9, 1972, as a private non-stock non-profit residential center for drug dependents. On March 1, 1975, CANU-DARN was transferred from Veteran’s Compound in Taguig, Metro Manila to its present location Camp Bagong Diwa, Bicutan, Taguig. It was also renamed the CANU - Treatment and Rehabilitation Center (CANU-TRC).

Since then, the present DOH-TRC Bicutan has undergone numerous transitions in management. The center’s operations have been handled at various times by the Philippine Constabulary, the Armed Forces of the Philippines, the Philippine National Police, and at present, the Department of Health, pursuant to Republic Act 9165, also known as the Comprehensive Dangerous Drugs Act of 2002, and, Executive Order 273, s. 2004, entitled “Transferring the Operation of the Government’s Drug Treatment and Rehabilitation Centers and
Program Nationwide to the Department of Health”. On April 01, 2008, pursuant to DOH – DPO NO. 2008 – 0868 the center changed its name from Centers for the Ultimate Rehabilitation of Drug Dependents (CUREDD) to Department of Health - Treatment and Rehabilitation Center Bicutan or “DOH TRC – Bicutan”.

According to Rawls (1971), in his study on a theory of justice, people can assume “a veil of ignorance” in which humans act as if they do not know which role they would eternally occupy. To solve this, a person must note that a fair solution requires not only impartiality but a full and equal respect. Considering others having less value than the many, a just solution will not be reached. Thus, in the case of the war on drugs, it is necessary to hear out the voices of the victims - the drug dependents themselves - in order to create a holistic, more efficient solution that minimizes the use of violence and the loss of life. In line with this, this study focused on the residents of the DOH TRC – Bicutan, seeking to determine the socio-psychological perspectives they held before entering the center – including the reasons for their use of illegal drugs – and after admission, as well as how the rehabilitation programs and activities they engaged in facilitated any changes in perspective. According to Engel (1971), a sociological perspective can help us understand why some people use drugs and why others react the way they do to such use. Social problems call for collective action with the understanding of who or what every person is. The deviant behavior of the once illegal drug users defines the social problem. In Engel’s study drug use, abuse and addiction (1971), she stated that deviance tends to create the meaning of social problem when the deviants enjoy little power or prestige in the society. Generally, this study sought to determine the socio-psychological perspective of illegal drug users at the Bicutan Treatment and Rehabilitation Center. Specifically, this investigation aimed to: 1) determine the perspectives of the residents before and after entering the center, and, 2) identify the programs and activities engaged by the residents inside the center.

This study aims to serve as an eye-opener for the public to fully understand what rehabilitation is for. The personal socio-psychological experiences of rehabilitation center residents will be explored so as to provide a more in-depth view of their journey from using illegal drugs to recovery. The findings of the study can also be used by government agencies as a baseline in implementing programs and policies in helping illegal drug users reintegrate themselves into society.
2. METHODS

2.1 Research Design

This research is a survey descriptive and qualitative study (case study) focusing on the socio-psychological perspectives of DOH TRC - Bicutan residents in Taguig City.

2.2 Research Locale

The research took place at the DOH TRC - Bicutan, Taguig City, Philippines on February 13 and September 17, 2017.
2.3 Participants of the Study

Out of 817 residents from six dormitories, 185 staying for 3 months above, 45 were interviewed. The selection of participants was done through purposive sampling, specifically selecting all of the residents who have stayed at DOH TRC - Bicutan for more than three months, regardless of their age or biological sex. Purposive sampling is a series of strategic choices about with whom, where, and how one does research (Palys, 2008).

Among the 45 respondents, 35 were male and 10 were female. Thirty-four of them used shabu prior to entering the facility while 11 used a combination of shabu and marijuana. Names of the residents were also changed for the privacy of the residents.

2.4 Instruments used in the Study

The researchers used an interview guide with questions formulated by the researchers themselves following the objectives of the study. The instrument was validated by a registered psychologist with input from a medical doctor specializing in community medicine.

Questions were translated in Filipino for better understanding of the participants.

Demographics:

- Name (Optional):
- Age:
- Gender:
- Dorm:
1. At what age did you start using illegal drugs?
2. What illegal drugs did you use?
3. How did you view life before you entered DOH-TRC-Bicutan?
4. How about after engaging with DOH-TRC-Bicutan’s programs and activities?
5. What changes have you experienced after the different activities done inside the rehab?

2.5 Data collection procedure

The researchers went to DOH TRC - Bicutan on January 30 and September 13, 2017 to ask to whom they should send a letter of request for interview. The researchers were directed to the admin secretary to whom they were able to send a letter and set an appointment. Through text, DOH TRC - Bicutan confirmed the appointment that was set. The interview sessions took place on February 13 and September 17, 2017. As dictated by law, no recordings were taken, The survey answers were supplemented by notes taken by the interviewers during the sessions.
The data from the interviews were critically reviewed using thematic analysis and triangulation of data.

Thematic analysis was used to create conceptual tools to classify and understand the phenomenon under the study: It involved lifting the most salient and relevant features from the data (Dey, 1993). It was done by coding or categorizing data. Chunks of similar texts were labelled into categories identified from repeated analysis of the data.

Triangulation of data was used as a means of approaching a topic from different perspectives in order to see if the data converges or create interesting information related to the context being examined (Marks and Yardley, 2012).

In this research, the observations came from the residents’ written answers, the data provided by the DOH-TRC - Bicutan, and researchers’ observations from the in-depth interviews.

3. RESULTS AND DISCUSSION

From the interviews with the residents of DOH TRC – Bicutan regarding their personal views before and after entering the center, two major themes were extracted: realization and change.

The theme of “Realization” is further divided into 1) importance of family and support, supported by the statements of Arsenio, Janmar, and Josefina 2) altered personal views on drug use, based from John, Mary and Tristan’s experiences and 3) spirituality, Rogelio, Jose and Marc’s personal assertion

The theme of “Change” is further divided into 1) improvement of health, in line with Arsenio, Janmar and Josefin’s experience, 2) better discipline/respect for authority, based from John, Mary and Tristan’s experiences and 3)

3.1 Socio - psychological perspectives of the users before entering DOH TRC - Bicutan

- REALIZATION

Under this theme, three subordinate themes emerged, namely, importance of family support, altered personal views, and improvement of self-esteem/self-confidence.

IMPORTANCE OF FAMILY SUPPORT
“… My mother did not visit me, I had no food and soap for days… I was waiting for her…,”

-Jayson, 27, had used shabu and marijuana for 11 years

“I want to support and provide for my family in the right way.”

-Nelson, 39, had used shabu for 20 years

“360° turn. I’m growing old and I’m just saw life ahead of me… I really need my family right now.”

-Alexandro, 41, had used shabu and marijuana for 25 years

Most activities of a human individual starts within the family. According to Ahlstrom (2002), the examination of family practices plays a great role in knowing which factors are connected with the use of illegal drugs. Family members are central in shaping behavior, including deviant behavior (Hayes A., 2007). Peers can also be an important sources of social support that can influence the risk of substance use problems. Research tends to find that social support enhances health (Broadhead et al., 1983). Family relationships matter the most, it protects their offsprings from high levels of stress and they are also the ones who can limit a person’s interaction with deviant peers.

According to Liddle, et. al. (2001), family relationship variables such as feeling connected to and cared for by one’s parents were strong predictors of positive adolescent development in one of the largest studies about adolescent health. The residents of DOH- TRC- Bicutan realized the importance of family support upon entering the center. Aside from the support of the treatment and rehabilitation center, the only support that they are having is from their family.

**ALTERED PERSONAL VIEWS**
“I thought that the only way I can solve my problems is through escaping them, rehabilitation taught me I was wrong.”

-Aldwin, 18, had used *shabu* and marijuana for 6 years

“I’m trying to learn and accept my mistakes, one by one. I was wrong, I committed a crime… I’m forgiving myself.”

-Eduardo, 40, had used *shabu* for 10 years

“My personality has changed. I am not always angry anymore… *shabu* without me is life with me.”

-Cyrus, 36, had used *shabu* for 16 years

Most of the residents had resorted to illegal drugs to escape problems. Upon engaging in the programs and activities of the center, they learned that escaping will not answer their problems and that it will only worsen things. The residents changed the way they look at life, society, their family, and themselves.

**IMPROVEMENT OF SELF-ESTEEM/SELF-CONFIDENCE**

“I will come out as a new person…I will not be affected by the society’s judgment… I love myself and I know that I deserve a second chance.”

-Joanne, 46, had used *shabu* for 14 years

“I am dreaming again and I know I can do it.”

-Mary, 44, had used *shabu* for 22 years

“Education is offered here, I’m in high school. I will graduate and I will have a better life.”

-Alexandra, 16, had used *shabu* and marijuana for 3 years
Based on the residents’ statements, the way they looked at themselves changed. They were aware that society looks down on them and that they once looked down on themselves as well. However, upon starting rehabilitation, they began seeing themselves in a more positive light.

In the study by Loeber (1990) entitled ‘Development and Risk Factors of Juvenile Antisocial Behavior and Delinquency’ he discussed that drug problems are now understood through knowing theoretical lenses such as social cognitive factors, psychological functioning, personality, and temperament, values and beliefs, family factors, peer relationships, environmental influences such as school and neighborhood, and socio-cultural factors such as norms and media influences have empirical links to the development and maintenance of adolescent drug abuse. The three subordinate themes discussed above clearly show realization as a major effect of being admitted at the DOH- TRC- Bicutan.

- **CHANGES**
  Under changes, three subordinate themes were seen: improvement of health, better discipline/respect for authority, and deepened spirituality.

**IMPROVEMENT OF HEALTH**

“There are a lot of changes in me, physically, I’ve become active and less stressed,”
- Arsenio, 23, had used *shabu* and marijuana for 6 years

“I participate in athletics in here. I am also dancing and I feel so much joy and energy.”
- Janmar, 33, had used *shabu* and marijuana for 15 years

“I’m already 60… I dance at times, there’s good food in here, my health’s improving.”
- Josefina, 60, had used *shabu* and marijuana for 20 years

As stated by the residents, their health improved significantly since their health conditions are being monitored inside the center and physical activities are also included for their treatment and rehabilitation.

**BETTER DISCIPLINE/ RESPECT FOR AUTHORITY**
“Inside we are being taught about how the law works and how we can be disciplined. We are ruled by time and house rules in here, one mistake have a consequence.”

-John, 35, had used shabu for 17 years

“I’ve been doing drugs for 22 years, I’m glad that I am not dead yet… but I am here and somehow I’m learning to accept that what I did is wrong and that I need to re-evaluate my life and follow rules and the especially the law.”

-Mary, 29, had used shabu and marijuana for 22 years

“They are informing us about the law. Now I clearly understand why I am here, I violated the law… at first I was hesitant and angry…”

-Tristan, 38, had used shabu for 21 years

Inside the center, the residents are obliged to learn about the law. Moreover, they have house rules and regulations that need to be followed. Discipline is a part of their rehabilitation and treatment.

**DEEPENED SPIRITUALITY**

“I’ve learned to ask for forgiveness and to fully believe in Him. I’ve accepted my past and I am recovering with Him.”

-Rogelio, 52, had used shabu, marijuana, nubain, heroin, ecstasy, inhalants, tablet, and syrup for 11 years

“I am talking to Him and I know that He’s just near me.”

-Jose, 45, had used shabu and marijuana for 25 years

“My faith in God strengthened.”

-Marc, 25, had used shabu for 6 years

The residents of the center availed of the spiritual aspects of the therapeutic community wherein they attend masses and participate in Bible study sessions.

Change is evident throughout every finding in the investigation. Prior to entering the center, residents used illegal drugs as a means of escapism. After entering the center, the residents generated perspectives that they think would help them cope better with life.

### 3.2 Programs availed by the residents of the Center

**Programs availed by the residents of the Center**
• **Physical Aspect**
  - Physical Examination: Prior to admission and before release of the client
  - Continuous Medical Check-ups
  - Detoxification for mild cases
  - Dental Consultation and Treatment
  - Diet Counseling
  - Physical Fitness Programs/Activities
  - Games and Sports

• **Psychological-Social Aspect**
  - Psychosocial assessment and Treatment Planning
  - Counseling (Individual and Group) and other psychotherapeutic interventions
  - Therapeutic/Process Groups
  - Psycho Education
  - Family interventions
  - Positive Socialization
  - Formal Education (Elementary and Secondary) Vocational Skills Training Program
  - Drug Abuse Prevention Education

• **Spiritual Aspect**
  - Religious Mass/Fellowships
  - Christian Discipleship
  - Spiritual Counseling
  - Spiritual Retreats
  - Values Formation

All of the residents had participate in the center’s programs and activities. According to Lambert and Barley (2001), the improvement of psychotherapy may best be accomplished through learning to improve one’s ability to relate to clients and tailor their relationship to individual clients. Common factors such as empathy, warmth, and the therapeutic relationship have been shown to correlate more highly with client outcome than specialized interventions. Decades of research indicate that the provision of therapy is an interpersonal process in which a main curative component is the nature of therapeutic relationship.
4. CONCLUSION

Rehabilitation, not violence, is a more long-term solution that can better benefit the country. This study describes how positive change is possible for former drug dependents through rehabilitation.

One of the most common reasons why the residents started using illegal drugs is because of the influence of their environment, specifically their friends. Most of them also surrendered themselves to the rehabilitation center of their own volition and have been staying there for three months or longer. Prior to entering the center, they were pessimistic. They were not family-oriented, caring little about their family's welfare. They gave little thought to their futures, believing that the only way they could solve their problems was through escape. However, upon realizing the consequences of their actions, they expressed remorse and a desire to do better.

The rehabilitation center has helped them change their negative perspective. They carried strong feelings of guilt for the people they had been but are now learning to accept and forgive. Some have even had the courage to face the people outside the center with their heads held up and without inhibitions. They have become a better version of themselves - emotionally, physically, mentally, and spiritually. They believe that the holistic nature of the programs they availed of have helped them a lot more than they ever imagined.

It is hoped that the results of this study will facilitate better public understanding of how former drug dependents are not defined by their dependence and are capable of reintegrating themselves into society. This may also be used by the government as a baseline study to formulate a better approach towards eradicating drug dependence by understanding what drives it and how it can be curbed.

The normalization of young people's drug use links to what they call 'time-out'- their leisure time and 'cultural consumption' habits that are greatly influenced by their peers, family and the community they live in (Parker, 2005), which was soon eradicated after months of rehabilitation and treatment by means of programs such as individual counselling and therapeutic treatment and activities which are educational, recreational and spiritual in nature.

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THE PERSPECTIVES OF SENIOR HIGH SCHOOL STUDENTS WITH OVERSEAS FILIPINO WORKER PARENTS

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ABSTRACT

Being left behind by parents is not easy. Absence of the parents can affect children in many ways especially when it comes to decision-making. This gives them burden or additional pressure to the thinking process of teenagers. This phenomenological study described and gave relevant information about the experiences of the students with parents working abroad. The purpose of this qualitative research is to inform the millennial regarding the life experiences of senior high school students with Overseas Filipino Worker parents not just to inform but to give them the knowledge in order to understand the life struggles of these individuals. In this study, the researcher conducted series of interviews. The researchers developed four (4) sets of questions, one (1) central question and three (3) sub questions or aide memoir to know the perspectives of senior high school students with OFW parents. These questions were answered by the participants aged 16-18 which is the average age of senior high school students enrolled in University of the East-Manila. The data gathered were analyzed using Interpretative Phenomological Analysis (IPA). After analyzing the data, master themes, and superordinate themes were explored. Four (4) master themes were formed, namely: Factors that affect the student’s decision making, Coping strategies in parental absence, Factors that affect the attitude towards studies, and Development of behaviour in the absence of parental role. From the findings generated, it is indeed recommended to motivate the students to become disciplined individuals and proactive in life.

Keywords: Overseas Filipino Workers; parents; perspectives; senior high school students

1. INTRODUCTION

Poverty is one of the problems that the world is facing towards economic success. Poverty is the lack of access of the families to the necessities thus depriving them of food, water, clothing and other resources that they may need for everyday living. According to Maslow’s Hierarchy of Needs, the biological and physiological needs of human should be met first making these resources essential for families.

However, due to poverty, families, especially the parents tend to immigrate abroad in order for them to support their children’s needs and for their future. Today, the Philippines is considered as one of the world’s largest export of labor migrants, and these citizens who worked abroad were called Overseas Filipino Workers. Moreover, these OFWs helped our
economy rise by simply sending remittance to their families, making the country’s gross national income high. The number of Overseas Filipino Workers (OFWs) who worked abroad at any time during the period of April to September 2015 was estimated at 2.4 million (PSA, 2015). In addition, millions of teenagers in the developing world grow up with at least one parent living abroad (Cortes, 2011).

It is not common nowadays for we call OFWs as the “modern heroes”. However, what happens to those teens that are left? Paradoxically, while parents work abroad for their children, their absence is associated with poorer outcomes. Those whose mothers were abroad, and those who employ avoidant coping, were particularly at risk (Acupan & Agbola, 2008).

From infancy to teenage years, some children just want to be loved and beloved by their parents. Since, our parents are our first teachers and we learn most of the basic things from them. We also got our values from them, and some even looked up to their parents as their role models when they grow up. However, sadly for those who did not grow up along with their parents and was raised by a relative, they do not know how they would have felt having been raised by their own parents.

As stated by Anonuevo and Sopena (2003) in their study, more than half of the OFW respondents really like to work abroad and like to take courses in higher education such as engineering, medicine/nursing, and even teaching. This leads to the children’s desire to work abroad just like their parents. They are aware that working abroad means getting higher salary even with or without having a college diploma.

The teenager’s social life is so much affected by having either one or both parents working abroad. Children whose parents are abroad have difficulty in social adjustments and psychological development (Battistella and Conaco, 1996). However, in the Scalabrini (2003) study, the children had shown to be socially adjusted because of the strong social support from family members and relatives. Despite the parents’ absences, teenagers tend to be more responsible in the household and more socially independent.

The absence of parents creates “displacement, disruptions, and changes in care giving arrangement.” There will always be an emotional and psychosocial effects to the teenagers left-behind by their parents working abroad. Still, it is a good way for the extended family to look for the children. However, it will not change the fact that these children left-behind are longing for their parents’ love, care, and presence (UNICEF, 2008).

This research aims to know the perspectives of the teenagers, specifically the Senior High School students, and the effects on their behavior of having parents working abroad. This study also aims to show the relationship of teenagers with their parents, and how the students cope with the problems without their parents.

2. METHODS

This section contains the methodology utilized to conduct the study such as the research
design, research locale, selection of the study, sampling procedures, research instruments, the data gathering procedure with the participants, and the data analysis procedures.

2.1 Research Design

The study focuses on the qualitative type of research (case study). It is an examination that sought to answer the demands to clarify the human conduct and involvements to discover the perspectives of students with OFW Parents (Corbin and Strauss, 1990; Hoepfl, 1997).

2.2 Research Locale and Selection of the Study

The researchers conducted interviews in the respective classrooms of the interviewees. This is the uniformity and openness of the information that is now being collected. Co-researchers came from different classrooms particularly in the University of the East Manila Senior High School and ten (10) Senior High School students with parents working abroad were selected ranging from sixteen (16) to eighteen (18) years-old as long as it fits the scope and limitations.

2.3 Research Instruments

The following instruments were used to gather data:

1. Informed Consent highlighted the rights of the co-researchers and also the confidentiality and the nature of the interview. The researchers will look for an approval from the respondents who participated in the study to look for agreement with their rights and benefits.

2. Voice Recorder is important to record the interview and to transcribe the data from the activity. It records everything about the co-researchers’ important details and their experiences, to easily identify what they have stated.

3. An Aide Memoir or guide questions contains the list of questions that serves as the basis of the whole interview. Linking this instrument to the present study, the researchers used the aide memoir as a guide question to help the co-researchers explain their life as students with Overseas Filipino Worker parents. A licensed psychologist who excels in the field of a qualitative research has already validated the entire instrument that the researchers have used.

2.4 Data Gathering Procedure

Qualitative researches aims to know the perspectives or the significance of how people define word, how they respond to the happenings, what outlook they will give and to know their perspective and experiences. Hence, it focuses on the real-life experiences rather than the given associations (Pietkiewicz & Smith, 2014). The researchers collected information through a series of in-depth interviews and analysed them.
2.5 Data Analysis Procedure

The researchers will use an Interpretative Phenomenological Analysis. As said by Pietkiewicz & Smith (2014), studies of this kind of analysis are based on the perspective or the test of the personal involvements of an individual on how he/she gives sense to them. Likewise, it is expected that people are ‘self-interpreting beings’, who want to achieve in this type of analysis is to examine how an individual answers. The research used an interpretative phenomenological analysis (IPA) of the data. From specific to overall assumptions, IPA includes steps of data analysis: (a) development from the researcher ideas to what is shared among the co-researchers, (b) portrayal of the experiences that transfer to an elucidation of it, (c) allegiance to comprehend the members’ minds and thoughts, and (d) psychological focus on how an individual make sense to a specific life event inside a framework.

3. RESULTS AND DISCUSSION

The basis of this section was formed from the exploration of these master themes and their superordinate themes, with every subject represented by verbatim concentrates from the interviews. These themes did not cover all aspects of the co-researchers’ experience, and were chosen due to their applicability to the questions.

Table 1. Master Themes and the Related Superordinate

<table>
<thead>
<tr>
<th>Master Themes</th>
<th>Superordinate Themes</th>
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<tbody>
<tr>
<td>Factors that Affects the Students’ Decision Making</td>
<td>Longing for Parental Care</td>
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<td></td>
<td>Guidance from Relatives</td>
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<td>Self-reliance</td>
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<tr>
<td>Coping Strategies in Parental Absence</td>
<td>Resiliency</td>
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<td></td>
<td>Appreciation of Parents’ Hardwork</td>
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<td>Peer support</td>
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<td>Factors that Influence their Attitudes towards their Studies</td>
<td>Initial adjustments</td>
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<td>Inspiration from parents</td>
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<td></td>
<td>Determination and optimism</td>
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<td>Development of Behavior in the Absence of Parental Role</td>
<td>Positive traits</td>
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<td>Negative traits</td>
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Interpretative Phenomenological Analysis (IPA) was used on the series of interviews resulted in the emergence of four (4) master themes. These were as follows: factors that affect the students’ decision making, coping strategies in parental absence, factors that influence their attitudes towards their studies, and development of behaviors in the absence of parental role.

3.1. Factors that Affects the Students’ Decision Making

This master theme explains that even though their parents are not around, there is someone who can still help and guide them in making the right decisions.

3.1.1 Longing for Parental Care

The students with OFW parents long for the love of their parents who earn a lot of money but do not have the time to be with their children. This can be a reason of not having
communication with the parents and because of that; the students seek for a parental love of their real parent by their side. In that way, they can earn more money and afford a private school, but cannot have one thing without sacrifice.

Social behavior of teenagers can also be affected by migration of the parents. In the study by Battistella and Conaco (1996), children without their mothers showed poorer social adjustment and suffered from impeded psychological development. In contrast, in the study of Scalabroni (2003), it resulted to positive effects of the teenagers as they adjusted physically, mentally, and socially in a proactive way, because they have strong social support from the other family members and relatives. As stated by respondent T, “Sometimes it’s sad because I’m not with my parents, but I think of what they are doing is for me.”

Longing for parents was manifested by depression, loneliness, feeling of helplessness and lack of affection. Regarding to the impact on health, young adolescents or teens are experiencing physical separation. Children are fed incorrectly, being tormented by stomach diseases, cure migraine with or even diabetes. In addition, they are likely to get sick of various diseases, and they go to the doctor just in case of emergency (Youth Essentials, 2013). This was one of the experiences of respondent I, saying “It’s hard, because they’re not here. It’s still different when they’re here, rather than they just give me what I need.”

The absence of parents creates “displacement, disruptions, and changes in care giving arrangement.” There will always be emotional and psychosocial effects to the teenagers who are left-behind by their parents who work abroad. Still, it is a good way for the extended family to look after and take care of the children. However, it will not change the fact that these children left-behind were longing for their parents’ love, care, and presence (UNICEF, 2008).

3.1.2 Guidance from Relatives

This superordinate theme explains that they still get the guidance that they need, from their parents, sibling, or relatives who communicate and give them information and advice. The respondents also verbalized having strong connections with those who give them advice. They still seek those peoples’ wisdom before they make decisions that can affect their lives, and according to respondent J, older relatives give advices because first of all they already have many experiences in life.

Hence, when a mother works overseas, her role is then filled up by the other relatives or siblings that could act as the teenagers’ mother, especially female relatives, who would take the role of caregivers in the family (PIDS, 2008). Also added by the statement of respondent J, “My guardians also helped me in giving advices and they also carefully explained why my parents went abroad.”

3.1.3 Self-reliance

This superordinate theme explains that the co-researchers have the tendency to keep their problems within themselves and don’t seek help from others if they can handle the problems themselves. It can also be interpreted that some of the co-researchers only think of the outcome after they had done the action.

This theme is supported by the statement of respondent A, “I do not expect if my decisions are always right because it is difficult to expect something. So when I decide, I expect two possible outcomes: the positive and the negative. If it’s positive then it is alright and if it’s negative I should learn from it,” and “I don’t ask for advices from my parents sometimes.”
3.2 Coping Strategies in Parental Absence

This master theme talks about the coping or surviving strategies of the teenagers with their parents working abroad. They seek the help of their friends and relatives whenever they encounter problems.

3.2.1 Resiliency

This superordinate theme explains that the teenagers develop a sense of being strong by transforming problems or struggles as a motivation or lessons to learn in order for them to be tough when they encounter problems and struggles in the future.

Regardless of whether the parents are present or absent, teenagers do basic responsibility such as doing household tasks. Example of these common tasks are cleaning the house, setting the table, washing dishes, taking care of their siblings, running errands, taking care of the plants and animals and other tasks. Although these children have been reported experiencing difficulties and longing for their absent parents, they also acknowledge that they learned to be more independent in the process (UNICEF, 2008), proving the statement of respondent B, “if it is only possible that they would not go abroad again, but they come and go so it is okay.”

3.2.2 Appreciation of Parents’ Hardwork

This superordinate theme explains the coping strategy of teenagers of giving value to the work of their parents that they understand that this is for their future.

According to respondent C, “it is for us that they go abroad so their hard work should not be wasted.” Some teenagers whose parent/s is/are working overseas tend to use their parent/s absence to good use. They also use it as a motivation and for a better outcome for their family. Some students tend to perform well in school even if their parents are not present, thinking of a good way to repay them by finishing school and eventually help their parents when it is time for them to retire and rest from the hardships (UNICEF, 2008).

3.2.3 Peer support

This superordinate theme explains the importance of peer relationships of the students who encounter problems with their OFW parents. These will help them to lessen the pressure and struggle by sharing their problems with their friends or classmates which is according to the statement of respondent A.

According to Lewin’s Theory of Adolescence, it is essential for some adolescents to have a certain group of friends whom they may share their thoughts and interests.

3.3 Factors that Influence their Attitudes towards their Studies

This master theme indicates that the Senior High School students of the University of the East – Manila developed positive attitudes towards their habits in their studies. They take the absence of their parents as an inspiration rather than a hindrance to their academic performance. However, it was also noted that the students also encountered problems with adjustments in their school performance.

3.3.1 Initial Adjustments

The co-researchers shared their experiences having on adjustment to their new environment where there are no parents to guide them as they learn in school. One of the examples that they have encountered was their difficulty to accept their situation at first, and having depression as the lack of parental role during their growth years and in their school performance that was experienced by the co-researchers. However, as time goes by, the
teenagers slowly recovered as they already adapted to their new environment of not having presence of their parents.

3.3.2 Inspiration from Parents

This superordinate theme indicates the way the students perceive their situation of parents having to work abroad. The co-researchers explained and told the researchers that they see their parents’ hardships and sacrifices as their inspiration and motivation to study hard.

3.3.3 Determination and Optimism

Determination is important among students. This value motivates them to study hard, and brings their best during their stay in the school. The co-researchers also explained that they strive hard to finish their studies because of the sacrifices of their parents who work abroad. Instead of taking their situation in a negative way, the co-researchers explained that they took their experiences in an optimistic way, so that this kind of situation will not affect their studies.

According to Lynn Scoresby (1987), families whose children consistently in school have provided a clear picture of the kind of family which promotes academic achievements. And as stated by Anonuevo and Sopena (2003) in their study, more than half of the OFW respondents really liked to work abroad and like to take courses in higher education such as engineering, medicine/nursing, and even teaching. This leads to the children’s desire to work abroad just like their parents, having aware that working abroad means getting higher salary even with or without having a college diploma.

3.4 Development of Behaviors in the Absence of Parental Role

The master theme explains the positive and negative effects of having OFW parents to the teenagers’ attitudes and how they face and deal with it. The master theme also explains in what ways the co-researchers developed their behaviors according to the experiences that they went through.

3.4.1 Positive Traits

The superordinate theme states that many of the co-researchers have become independent in spite of the absence of their parents, and because of that the foundation of their family has grown stronger as stated by respondent B. Many of the co-researchers have also realized that the teachings of their parents were not worthless and that it was for their own good which is according to respondent C, “I also became bad at first, but as time passes, I thought that it is for us. So I just study hard.”

3.4.2 Negative Traits

The superordinate theme explains that the co-researchers have a tendency to do things that are not good to the community due to the lack of guidance. Numerous investigations across disciplines have argued that growing up in a single-parent family had negative consequences on their school participation and educational success of teens (McLanahan, 1985; Amato, 1987; Coleman, 1988; Beller and Krein, 1988; McLanahan and Sandefur, 1994).

At the social level, the impact of migration was reflected in the risk of these teens because sometimes they are abused emotionally, physically and sexually. Teens become aggressive and become very violent and therefore cannot establish friendships with their peers (Youth Essentials, 2013), such as the statement of respondent A, “it is because of the lack of attention of my parents that I became bad.”
According to respondent D, “the negative side is that they are not here to guide me so sometimes I lie.” In addition, many of them have deviant behavior. They begin to smoke, take drugs, steal, drop out of school and run away, although they have the means to finance their education (Youth Essentials, 2013).

4. CONCLUSIONS

The study aimed to know the perspectives of the Senior High School students towards the absence of their OFW Parents. The researchers distinguished the factors that affect the students’ decision-making, and identified the struggles that the students encounter that are needed to be discussed with his/her relatives or friends. The researchers also distinguished that the students used the hardwork of their parents abroad as inspirations to their studies, and also identified that there are positive and negative attitudes that the students develop because of the absence of their parents.

![Diagram](image)

Figure 3. The Perspectives of Senior High School Students with OFW Parents
By: Ian Miguel Baile - Student from University of the East Manila

Therefore, the researchers came up with an airplane, a house, a flag, and a broken chain which symbolized the different themes gathered through the conducted interviews. The flag represents the place where the child was left; the house represents the master theme, “Factors that Affect the Students’ Decision Making” and the “Factors that Influence the Students’ Attitudes towards their Studies.” This means that despite the situation of the teenagers having OFW parents, they developed positive attitudes or traits towards their studies, thus making it an inspiration to strive harder. Moreover, the house also represents the relatives that support the teenagers, and also the independence of an individual, particularly the teenager in which he/she will stand firm and develop a better personality. As for the airplane, it represents the master theme, “Development of Behavior in the Absence of Parental role.” This shows the way how the teenagers perceive their parents going abroad where they look at the airplane (in this case, their parents) and think about how they work hard just to provide the needs of those who need
the demand the storm represents the struggles of parents working abroad. The broken chains represent the master theme, “Coping Strategies in Parental Absence,” showing the connection between the children and the parents’ relationships towards each other.

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Examining the Art in Artificial Intelligence (AI): A Deleuzian Analysis of AI ‘Artists’

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ABSTRACT

Much of our culture have now been embedded with technological imprints so much so that even the manner by which we do our everyday human activities, from the brushing of our teeth to the means of transportation for any distance, invite the companionship of machines. The emergence of Artificial Intelligence (AI), in particular, has caused dramatic change in the way humanity shapes its future. AIs are now equipped with what was previously rendered by Aristotle as the essence of human beings, that is, rationality, moving towards the direction of sentience. However, one thing that remains to be a mystery is whether or not the aesthetic capacity of human cognition can be programmed into AIs.

This paper addresses the issue of artificially intelligent machines and the possibility of their making human artists obsolete. In particular, it asks the question: can artificially intelligent machines become visual artists? The study analyses research attempts at making AIs into art generating agents. In addressing this problem, the author turns to postmodernity’s most enigmatic thinker, Gilles Deleuze, and his contributions to the field of aesthetics. In particular, it draws on two main concepts: art as a power of thinking, along with philosophy and science, to address the questions of what counts as art and what the purpose of art is; and his post-anthropocentric inclinations, to address the question of who can be artists. In so doing, the author of the paper provides a Deleuzian analysis of AI art generating agents.

1. INTRODUCTION

In his most celebrated work, The Singularity is Near: When Humans Transcend Biology, Ray Kurzweil made an attempt to predict the future of scientific and technological innovation. Accordingly, the progression of technological innovation has, in the past couple of decades, been described to be one that exhibits a rapidly exponential increase, leading us to contemplate on the possibility of human extinction, if not, an even more dreaded apocalyptic future. His calculations have led many to believe that by 2045, the Singularity, as he coins it, would take over and Artificial Intelligence would have superseded human intelligence in all aspects. In other words, superintelligence, or that which means, following another scholar’s definition, “any intellect that greatly exceeds the cognitive performance of humans in virtually all domains of interest”, is soon to emerge. While Kurzweil’s work was not intended to bear a heavily negative connotation, it becomes inevitable for us, humans, to anticipate the possible implications for the coming event. Even the leading figures in contemporary cognitive science including Sam Harris, Elon Musk, and Nick Bostrom have all given us their warning.

Evidently, much of our culture have now been embedded with these technological imprints so much so that even the manner by which we do our everyday human activities, from the brushing of our teeth to the means of transportation for both short and long distances, invite the companionship of machines. What is most peculiar about these advancements is how machines have now transformed into something other than passive. The pre-modern notion of machines as slaves is now seemingly overturned as we welcome the rise of artificial intelligences (AIs). We are now witnessing the transition of machines –

70 Ibid.
72 Ibid.
what we used to deem as objects that can be utilized to achieve human ends — from passive human inventions that aid us or ease human labour towards this new, active, intelligent, and, if research in the field becomes successful, soon to be self-aware beings. It is thus unavoidable that we worry about the fate of our species considering that AIs are now capable of exhibiting what is rendered by many Aristotelian scholars to be the essence of human beings — that is, rationality.\textsuperscript{73} While it is undeniable that artificially intelligent machines are not only capable of becoming equipped with quantifiable knowledge but also capable of generating further knowledge out of the existing programmed inputs in their algorithms, we wonder whether or not they can also take over the creative side of human cognition. In other words, we wonder whether or not AIs could become artists in a similar manner to that of human artists.

This paper addresses precisely the issue of artificially intelligent machines and the possibility of their making human artists obsolete. It is worth noting at this point that the author recognizes the fact that art comes in various forms: there is music, there is performing arts, there is literary arts, there is visual arts, and many others. The study will, however, focus on only one art form, that is, visual arts. Having established the scope, we reiterate the problem through the following inquiry: can artificial intelligence become visual artists? Arguably, this inquiry can easily be answered by a resounding yes, as we will see in the succeeding discussion. However, this affirmation needs to be reinforced by backing it up with a strong aesthetic theory. Thus, in addressing this problem, the author turns to postmodernity’s most enigmatic thinker, Gilles Deleuze, and his contributions to the field of aesthetics. In particular, it will draw on two main concepts: art as a power of thinking, along with philosophy and science, to address the questions of what counts as art and what the purpose of art is; and his post-anthropocentric inclinations, to address the question of who can be artists.

2. ARTIFICIALLY INTELLIGENT ART GENERATING AGENTS

Inasmuch as there are countless existing frameworks through which aesthetic inquiries can be addressed, there are also several approaches by which one could seek an answer to the aforementioned question: Can artificial intelligence become visual artists? The Russian author Leo Tolstoy would differ on the grounds that art for him “is a human activity consisting in this, that one man consciously, by means of certain external signs, hands on to others feelings he has lived through, and that other people are infected by these feelings and also experience them.”\textsuperscript{74} In other words, both the artist and the spectator must necessarily be human in order for art to genuinely emerge. Emotivism, on the other hand, would give leeway on the part of AIs in that art, for its proponents, requires only the partaking of emotions in the aesthetic creation and the aesthetic experience of the spectator. Thus, in the event that Emotional Intelligence, which interestingly enough is currently under development, becomes perfected, emotivists would permit the authenticity of AI artists.

For the purposes of this study, however, the brief answer would be: yes, artificial intelligence can become visual artists. If we temporarily equip the term ‘artist’ with the general definition, ‘one that generates works of art,’ then the answer to this question is decisively positive. There have been many instances before in which machines took part in the creation of artworks. A good example for this would be the art of photography which necessitates the use of cameras as instruments for generating art. But photography fails to prove the above proposition in that first of all, the machine is not artificially intelligent and secondly, there is the presence of human intervention in the generating process. The study therefore limited its criteria further by considering the following conditions: (1) the machine must be artificially intelligent, that is, it must be capable of cognitive functions and (2) there must be no human


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intervention in the generating process. The study will delve on one such AI that satisfies these given conditions, namely: Creative Adversarial Networks (CANs).

2.1. Artificial Neural Networks and Connectionism

In order to understand what CANs are, it is imperative that the concept of artificial neural networks and connectionism be elaborated first. The AI that this study puts into consideration is one that involves artificial neural networks. It was when scholars began thinking of the human brain as a computer that they, as a result, began creating AIs that are structured similarly to that of its human counterpart.

Artificial neural networks exist on the assumption that artificially intelligent machines should be modelled after the human brain – that is, a composition of cognitive neural networks working interconnectively to produce an output – in order for it to become a lot more human-like, as opposed to the earlier prevalent theoretical model in cognitive science and technology, the computational theory of the mind, where computers are made to exhibit functions on the basis of simple, linear algorithmic inputs. This idea is closely intertwined with one of the most celebrated theories in philosophy of mind and AI today, the theory of connectionism, which speaks of the human brain as a network of neurons interactively partaking in performing cognitive activities. Nevertheless, the idea of adopting the pattern of human cognition onto the development of AIs does not necessarily entail that the purpose of doing so would be for AIs to mimic human beings in performing a given function which, in this case, pertains to that of generating art. Rather, it simply uses the biological structure of the human brain as a foundational model for creating the anatomical configuration of the AI. This is a crucial point to take note of as it will become problematic for the central thesis of the paper, particularly, in relation to the discussion on anthropocentrism, if it otherwise goes unaddressed.

2.2. Creative Adversarial Networks

A team of researchers from Rutgers University, College of Charleston, and Facebook AI Research, USA have very recently published their study which they entitled CAN: Creative Adversarial Networks Generating “Art” by Learning About Styles and Deviating from Style Norms. The study introduces a ground-breaking innovation in the intersecting fields of technology and the arts, in particular, what they call Creative Adversarial Networks. These are artificially intelligent ‘art generating agents’ which create visual arts, in the form of paintings, with minimal human intervention. The researchers’ objective in creating this AI was to “investigate a computational creative system for art generation without involving a human artist in the creative process, but nevertheless involving human creative products in the learning process.” Furthermore, “the agent’s goal is to generate art with increased levels of arousal potential in a constrained way” meaning to say that it should constantly deviate from already existing style norms in order to instantiate this effect onto its spectator.

In creating the AI, the following considerations were made by the research team: (1) perceptual ability; (2) deviation from style norms; (3) exposure to established works of art – all of which achieved with very minimal human intervention. To be precise, human involvement is present only in the learning process rather than in the generating process. Established works of art are put into the system so that the AI becomes exposed to them. Two contradictory signals are equipped in the AI so that one would generate works that may be classified by style norms as art, while the other one ambiguates the art in order to produce a work that deviates from the norms.

75 Elgammal, A., Liu, B., Elhoseiny, M., Mazzone, M. (June 2017) CAN: Creative Adversarial Networks Generating “Art” by Learning About Styles and Deviating from Style Norms.

76 Ibid, 2.
As a result, CANs generate new forms of art that are neither too far away from nor too close to established art styles.

3. **DELEUZIAN ANALYSIS**

Known as one of philosophy’s most controversial thinkers in postmodernity, Gilles Deleuze remains to be a key figure in the philosophy of art. The transversal and trans-disciplinary nature of his writing allowed for his works to be extended in almost any field of discipline ranging from literature, architecture, cinema, and even up to visual arts. While many scholars turn their attention to his major works and critique on Marxism and psychoanalytic theory, specifically those that come from his most popular works *Anti-Oedipus: Capitalism and Schizophrenia* and *A Thousand Plateaus: Capitalism and Schizophrenia*, his influence on aesthetics comes from his lesser known publications including *Francis Bacon, Cinema I and II*, *Kafka: Towards A Minor Literature* and his final collaboration with Guattari, *What is Philosophy?*. Despite his countless writings that touch on the subject of art, for lack of a sophisticated, holistic aesthetic theory, one can only imagine what a Deleuzian aesthetics look like. Nonetheless, his works remain integral to our understanding not just of aesthetics, but of the ontology of art. This study will take a turn towards a potentially Deleuzian analysis of CANs and their place in the realm of aesthetics.

3.1. **Art as a Power of Thinking**

A Deleuzian aesthetics, like a Deleuzian metaphysics, would be one that promotes vitalism, one that celebrates the creation of life. In *What is Philosophy?*, Deleuze and Guattari reintroduces philosophy, art, and science as three distinctive powers of thinking, each of which equipped with their corresponding capacities to create new forms of life. Following Deleuze and Guattari’s definition, generally speaking, “from sentences or their equivalent, philosophy extracts concepts (which must not be confused with general or abstract ideas), whereas science extracts prospects (propositions that must not be confused with judgments), and art extracts percepts and affects (which must not be confused with perceptions or feelings).”

Percepts and affects are not perceptions and feelings in the sense that they need no such human subject in order to be espoused. Unlike perceptions and feelings in which the human subject plays an integral role in engendering such qualities, percepts and affects are purely embedded within life.

Moreover, for Deleuze and Guattari, “philosophy is the discipline that involves creating concepts,” which is to say that in order to be able to effectively engage in philosophical activity, one needs not only to “add another word to a language,” perhaps a closer picture would be to construct a language of one’s own, but ultimately, in Claire Colebrook’s reading of Deleuze, what is important is “[to transform] the whole shape of a language,” which is in keeping with the philosopher’s task of producing new images of thought out of an existing plane of immanence. Doing science is, on the contrary, a functional activity. It involves the observation of empirical facts, as we know them, or states of affairs so that it may “give order to the chaos of life.”

The functions created out of science are true on spatio-temporal grounds but should not be taken to mean that life is limited to such truths.

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78 Ibid., 5.
80 Ibid.
Art, now, as another power of thinking creates percepts and affects that allow us to see beyond the ordinary states of affairs in order to produce beings of pure sensation. By beings of pure sensation, Deleuze and Guattari are implying that the work of art must not be viewed as something that is attached to its human subject. Purity, in this case, pertains to a non-subjective return to nature. As elaborated by the authors themselves, “Percepts […] are independent of a state of those who experience them. Affects are no longer feelings or affections; they go beyond the strength of those who undergo them.”

“[Sensations, percepts, and affects] could be said to exist in the absence of man because man, as he is caught in stone, on the canvas, or by words, is himself a compound of percepts and affects. The work of art is a being of sensation and nothing else: it exists in itself.” Creating art means liberating new intensities, sensibilities. Therefore, for something to be rendered art, it has to be able to instigate percepts and affects as a measure of its creative power.

4. CONCLUSION: TOWARDS A POSTHUMAN ART

Deleuze’s notion of art is evidently one that resists the anthropocentric view. In other words, it needs not cling to an artist, nor a human subject in order to exist. The artist is therefore a simple apparatus, an abstract machine, in Deleuzian terminology, whose role is to make evident these pure blocks of sensation. Therefore, in addressing the question of whether or not artificially intelligent machines can become artists, the answer would be an ambiguous yes. Artificially intelligent machines can become artists in the sense that they can espouse percepts and affects by means of the works of art that they are able to generate. The ambiguity lies in the subjectlessness of the aesthetic phenomenon, as we have seen in Deleuzian thought.

5. ACKNOWLEDGEMENT

This paper will not be possible without the help of the author’s professor in philosophy of mind, Dr. Jeremiah Joven Joaquin of De La Salle University-Manila, for providing his initial insights on the problem, her professor in aesthetics, Dr. Beverly Sarza of De La Salle University-Manila, for providing a body of literature deemed significant to the problem, Dr. Hazel Biana and Dr. Leni Garcia for endorsing the author’s application for subsidy (subject for approval) and the institution itself to which she is affiliated, De La Salle University-Manila, for providing the author with a good academic foundation and research framework.

6. REFERENCES


83 Ibid.
84 Ibid.
No one dreams to live on the street. However, living on the street has been a forced choice for some children and adolescents. Four studies with altogether 230 adolescents (consist of early, middle, and late adolescents) living on the street in Jakarta greater area but attended informal school were carried to look at how prepared they were for a better future. Study 1 looked at the resilience of street adolescents. Study 2 related the resilience with types of values that street adolescents hold. Study 3 looked at the life satisfaction of street adolescents as compared with other, non street adolescents. The last study related street adolescents’ self-esteem with their achievement motivation (differentiated as hope of success and fear of failure). Resilience scale from Wagnild and Young (2009) and Connor and Davidson (2003) were used in study 1 and study 2, respectively. Study 2 also used Portrait Values Questionnaire from Schwartz (2006) to measure 10 values. Study 3 used Multidimensional Students’ Life Satisfaction Scale from Huebner (2001). Study 4 used Rosenberg’s (1965) Self-esteem Scale and Achievement Motives Scales-Revised from Lang (2006). The results show that street adolescents have relatively good resilience. Street adolescents value conformity as important and power as unimportant. Resilience is found related with values of security, universalism, stimulation and self direction. There is no difference on life satisfaction between street adolescents and non – street adolescents. Self-esteem of street adolescents is also good, and it is related positively with hope of success while negatively with fear of failure. The results of these studies have good implication on how getting education is important to empower street adolescents for their better future.
According to staff from Panti Anak Jalanan (Street Children Institution) SDC at Bambu Apus, Jakarta Timur (personal interview in December 2013), street children in Indonesia were on the street because their parents pushed them to. Furthermore, there were generations of street children, meaning that street children have parents who themselves were once street children, and so forth. Indonesian government through Ministry of Social Affairs used a different approach to reach the goal of no street children by the end of the year 2014. Staff from Street Children Institution SDC went from Merak (a seaport located at the farthest of West Java) to Cikampek (located at further east of West Java) looking for street children. These street children were brought to SDC to be educated and empowered so that they would not go back to street again. In order to do that, the street children need to sign an agreement indicating they agreed to obey the rules from SDC. They received educational program for about six months and were facilitated to return to their family. If they had some school experiences, they were financed until finishing Year 12. Those without any school experiences, were given an alternative between receiving nonformal education or some trainings so they would be able to find jobs.

Grundling and Grundling (2005) (see also Barker & Knaul, 1991; Hutz & Koller, 1999) distinguishes between children on the street and children of the street. The former still have their home and were pushed to work to help financing their family. The latter do not live with their family, or even, they might not contact their family for a long time. They also do not go to school. Therefore they have to live on the street in order to survive.

Street children chose to be street children so that they were able to continue living. Demartoto (2012) identified three factors that influence a child to become a street child. These factors are factors at the macro level (such as political, war, economic crisis, urbanization), at the meso or family level (such as broken family, single parent family, poverty, being neglected or receiving domestic violence) and at the micro level that come from the child himself (such as running from home, drop out from school, feeling unwanted or avoided by his- or her family).

The research question for Study 1 is, how is the resilience of street children?

Study 1

Study 1 looks at the factors that build up the resilience of street adolescents.

Method

Participants. Three street children, two boys and one girl, were interviewed to understand their resilience as street children and factors that influence their resilience. The characteristics required as research participants were that they had been on the streets for at least three years, for a minimum of six hours per day, and were still below 18 years old. The three years spent as street children were regarded enough to build their resilience. Six hours per day were enough to distinguish street children who were forced to find enough money by being on the street, as compared to other children who were accompanied by their parents to act as beggar occasionally.

Instrument. The interview guidelines are as shown in Table 1 below.
Table 1. Interview guidelines for personal interview

<table>
<thead>
<tr>
<th>Area of concern</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td>Are you in school now? What grade are you in? Please explain what do you like and dislike about school. What school subjects do you like and give some evidence that you like that subject(s). How would you feel if you do not go to school. What would be the consequences of not going to school? Do you have any idea what would you be in the future?</td>
</tr>
<tr>
<td>Resilience</td>
<td>How do you see your parents in educating you? How is the relationships among your family member? How do you feel every time you are on the streets? What factors do you think influence you to survive on the streets? What kinds of difficulties Do you see yourself as not on the streets any longer? What make you think that way?</td>
</tr>
</tbody>
</table>

Results

*From I, participant 1.* I was found at 10 pm when he was selling tissues and piggy banks at one garden in Central Jakarta. The interview was carried on with the permission of an adult who I regarded as his guardian. I was wearing a T-shirt, short pants, and a pair of thong. I was the youngest in the family of two children. He was only 14 years old and had been on the streets for eight years. He has an older sister. His father worked as a security guard in an office with an income of Rp. 1,000,000 per month, not enough to finance a family of four.

I did not feel close with both parents; he almost never talked to his mother. I did not feel that his parents taught him anything. He felt closer to his friends and admitted their influence toward his behavior. Since he could earned some money when he was on the street, he did not feel encouraged to spend time with his family. I sold tissue and piggy banks and could earn more than Rp. 1,000,00 a month, more than his father’s salary. He started selling from 8 at night until 3 in the morning during school days and until 5 in the morning on week ends or holidays. His selling area was among other sellers in one garden in Central Jakarta. He was close to one food seller and every time he got free food from this seller.

I was quite talkative. He knew his customers, and some of them were regularly came there. He was also receiving money from his customers to pay the tuition fee. He was quite enthusiastic about his education, admitting that education was really important to reach a better future. His junior high school started at 1 pm, giving him enough time to rest after went back from work early morning. English was his favorite subject and he liked practicing English to foreigners who came to his area. He also enjoyed meeting friends at school who were different from the friends he met on the street or his fellow street children. Even though sometimes he skipped school and got punishment for doing that from his teachers, I planned to continue his study until the university level. He even said that if possible, he would like to get a doctoral degree. He pictured himself as an actor for his future. To achieve this, I did not mind to be a street child and saved his money for his education.
From O, participant 2. O, a boy of 12 years old, was found at mid night close to where I was stationed. O was among a few other street children. He wore a T-shirt, short pants and a pair of thong. He was in Grade 5 and attended school regularly. As a fourth child among six, O felt compelled to work. His parents got divorced and he stayed with his mother who already remarried. His father did not have a job and his stepfather worked as a parking guard.

O first learned to live on the street by his father, back when he was only five years old. At that time he was accompanying his father who was a beggar. In addition to begging, O also worked as a shoe polisher. When he turned to eight years old, his father let him decide to be a beggar or a seller. O chose the latter and started selling tissues. For him, earning his own money as a seller would better equip him for a better future. During weekdays he worked until midnight because his school started at 6.30 am. But during holidays he worked until 5 in the morning. Then he went home with a neighbor who sold fried rice in the same area, a garden in Central Jakarta.

O liked selling and he gave all money he earned each day to his parents. He got only Rp. 1,000 every day for his allowance. He also got meals by helping another food seller or by asking from the customers because he seldom found food at home. O liked to play football with his peers. He even imagined himself as Cristiano Ronaldo, a famous football player. He learned from Youtube that a professional football player was paid enormously.

There were often times when he did not sell much because the customers bargained for his tissues and did not want to pay the regular price. As a consequence, he brought home less money than usual. When it happened, his parent would beat him. This created an idea for O to run away from home. He kept this idea until he found enough strength to really actualize it. At this moment, he would rather stayed overnight in other places to avoid the punishment at home. According to O, his stepfather was mean and got angry easily. His stepfather had already drove out his older sister from their home. O did not feel at home at all. He often heard dogs’ barking that sound like wolves’. From his neighbors he knew that his home was once a cemetery. There was no bathroom in his house; he needed to use a public bathroom and toilet.

It was not surprising if O often skipped school even though both his parents and teachers were angry when he did that. He found difficulties to get up early and got ready for school. He told his teachers that he worked until midnight every night.

**Protective Factors**

Interview results from three participants show that each participant has purpose in life, as well as trying to achieve those purposes. Having a purpose is the main characteristic of resilience; by having a purpose, one can have a strong power even though one may encounter difficulties (Wagnild, 2010)

All participants also realized the importance of education. They understood that education through schools as a place for them to empower themselves to achieve a better future. This is aligned with previous researched which stated that street children realized that through education they will get out from poverty and streets. (Verma, Sta. Maria, Morojele, 2011)

Good health condition may also support their resilience. Mandleco and Peery (2000) stated that health, genetic predisposition, temperament, and gender are parts of biological factors that affect resilience. Internal factor that drives the participants is self-confidence. Having confidence or strong belief that all things will have its own way out is the main component in the lives of resilient children (Werner, 1984).
External factors that influence each participant are friends. Playing with friends able to support resilience in participants. External factor in resilience is mirror in the form and quality of relationship both inside and outside of family (Mandleco & Peery, 2000). Friends are included in it. This is also in accordance to previous research done by Verma, Sta. Maria and Morojele (2011), which said that main support received by street children, are through peer group, real family or fictitious family. Fictitious family in here is people who live with them on the streets, and play the role of being their protector from the danger of living on the streets (Verma, Sta. Maria, Morojele, 2011). Family factor also becomes driving factor for the only female participant. Driving factor of resilience in family include house environment, family members (parents, siblings, and grandparents), and parenting practice (Mandleco & Peery, 2000).

**Risk Factors**

Risk factors were only clear shown in on of the male participants. Family appeared to be a risk factor that was most apparent from depth interview, he presumed that family was the factor that made him very uncomfortable. This was because the participant was a victim of violence by his own parents. The cause of beating was usually based on failure to bring back money on that day. A few times, this condition made the participants wanted to run away from home.

From Study 1 we knew that some street children understood the importance of education and attending school for a better preparation for their future. Some other street children chose to go to school, even though informal. Verma, Sta. Maria, Morojele (2011) from their study also find that street children realized how importance education was for them in order to have a better life overcoming poverty. On the other hand, it is not easy for street children to set aside time and focus on their study. Stressors that face by street children are numerous as have been mentioned above. Nevertheless, Grotberg (1995) finds that street children in Peru are resilient enough so that they could be both survive on the street while finishing their study. For Indonesian adolescents, Ardias (2008) finds that poverty does not necessarily becomes a hindrance to engage in a better future orientation and preparation. Street children who became participants in Ardias’ study could still be resilient and have good future orientation when they were enrolled in educational program. Thus, school has an important role to build resilience and good future orientation even among poor or street children. This is in line with (Henderson & Milstein, 2003). Unfortunately, due to limited financial resources, not every street child is able to enroll in school and get this advantage. An option to this is enrolling in a nonformal educational program. Indonesian government through Ministry of Education provides alternatives for those who are unable to go to regular school but still want to have school diplomas. There are three educational programs serving this purpose: Paket A for those completing Year 6 of Elementary School, Paket B for those completing Year 9 of Junior High School, and Paket C for those completing Year 12 of Senior High School. Another option given to those who cannot attend regular school is give a vocational courses, run from several weeks to several months.

Friends or peers is the main factor why street children are able to stay on the streets. This is also said in previous research by Verma, Sta. Maria, dan Morojele (2011) who mentioned that the main support received by street children is through peer group, real family and fictitious family. Fictitious family in here are people who live with them on the streets, and play the role of being their protector from the danger of living on the streets (Verma, Sta. Maria, Morojele,
They also realized the importance of school; they understood school as a place for them to unwind because they could play with friends. They also realized schools as a gate to a better future. This is aligned with previous researched which stated that street children realized that through education they will get out from poverty and streets. (Verma, Sta. Maria, Morojele, 2011).

Their ability to anticipate risk factors and optimize security factor for them to survive on the streets showed that street children have resilience. Able to adapt with environment, having purpose in live and able to have fun with friends, are also characteristics of resilient children.

Discussion

Study 1 gives a picture on resilient on street adolescents and sees factors that help them survive. This shows that in facing the street conditions that is full of risks and threats, participants can survive. It seems that participants have high resilience because they are able to adapt with the threatening environment and able to take out the positive results. Apart from that, they show the realization that they have to get out from the streets because its not a good place for them (Verma, Sta. Maria, Morojele, 2011).

Personal characteristics that clearly give influence are self-confidence of each participant. Aligned with Werner’s statement (1984) that said having self-confidence or a strong belief that all things will have its own way out is the main component in the lives of resilient children. This factor is seen as one of main internal factors that affect the high level of resilience in street children.

In addition to that, external factor also has a big role in forming resilience. On participants of street adolescents being researched, prominent factor is the existence of friends. This statement is again aligned with statement by Mandleco & Peery (2000) where they assumed external factor on resilience is shown in the form and quality of relationship inside and outside of family. The reflection of the importance of the existence of friends is implemented daily by playing. Bernard (1993, in Zolkoski & Bullock, 2012) thought that resilient children are those who work well, play well, love well, and expects well. One of the characteristics mentioned was play well.

Next is how school can build their resilience. By keep on going to schools, they feel that they have purpose in life. This is explored in Study 2.

Study 2

For street children and adolescents, school is important to build resilience (Verma, Sta. Maria, & Morojele, 2011). It is possible to conclude that school is one of the means for children to gain positive experience, which is one of the most important factor of resilience in children. Schools are seen to be able to enable them for their future and they believe school can take them out from the street (Verma, Sta. Maria, & Morojele, 2011). School can also be considered as a place for them to unwind and relax because they have to work on the streets. This means school can be seen as a driving factor for resilience. This can be better understood if the street adolescents are asked to tell the experience they get from attending school.

Method
Participants. One hundred and eleven adolescents (69 were boys), age 12 to 18 took part in this study. They all were enrolled in nonformal educational programs in Jakarta, Depok, or Tangerang, targeted specifically for street children and adolescents until they finish Year 12. Data collection were not carried on until the school principles gave the permission and each of the participant signed the informed consent.

Instruments. Two research instruments were used: CD-RISC 10 (Connor Davidson – Resilience Scale) and personal interview. CD-RISC 10 consists of 10 items (originally 25 items from Connor and Davidson, 2003 and shortened by Campbell and Stein, 2007 to 10 items without losing its reliability and validity values). The Indonesian language of this scale had been used by Pusat Krisis Faculty of Psychology Universitas Indonesia and its reliability and validity had been checked by Suleeman, Santoso, Takwin & Hafiyah (2013). It is Likert-type scale with 5 options: never, very rarely, sometimes, often, and almost always. The interview guidelines are the same as in Study 1 with addition to describe in more details what are regarded as the best and worst phase as street children including the experience they have from school, so that a more complete understanding of the participant’s resilience and how school had helped them can be gained. Interviews were completed on three participants, all boys who had filled in the CD-RISC 10.

Results

Demographic characteristics. Table 2 shows the demographic characteristics of the participants.

Table 2. Demographic characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
</tr>
<tr>
<td>Boy</td>
<td>69 (62.2%)</td>
</tr>
<tr>
<td>Girl</td>
<td>42 (37.8%)</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
</tr>
<tr>
<td>12 yo</td>
<td>11 (9.9%)</td>
</tr>
<tr>
<td>13-15 yo</td>
<td>44 (39.6%)</td>
</tr>
<tr>
<td>16-18 yo</td>
<td>56 (50.4%)</td>
</tr>
<tr>
<td><strong>Job</strong></td>
<td></td>
</tr>
<tr>
<td>Teaching assistant</td>
<td>1 (.9%)</td>
</tr>
<tr>
<td>Jockey (3 in 1)</td>
<td>2 (1.8%)</td>
</tr>
<tr>
<td>Newspaper distributor</td>
<td>2 (1.8%)</td>
</tr>
<tr>
<td>Car technician</td>
<td>1 (.9%)</td>
</tr>
<tr>
<td>Umbrella lender</td>
<td>14 (12.6%)</td>
</tr>
<tr>
<td>Housemaid</td>
<td>2 (1.8%)</td>
</tr>
<tr>
<td>Pengamen</td>
<td>30 (27%)</td>
</tr>
<tr>
<td></td>
<td>Street seller</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td></td>
<td>3 (2.7%)</td>
</tr>
<tr>
<td>Time already spent on the street</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;1 year</td>
<td>7 (6.3%)</td>
</tr>
<tr>
<td>1-2 years</td>
<td>16 (14.4%)</td>
</tr>
<tr>
<td>3-4 years</td>
<td>11 (9.9%)</td>
</tr>
<tr>
<td>5-6 years</td>
<td>4 (3.6%)</td>
</tr>
<tr>
<td>&lt;6 years</td>
<td>4 (3.6%)</td>
</tr>
<tr>
<td>1 year</td>
<td>69 (62.2%)</td>
</tr>
<tr>
<td>Length of education</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>2-6 years</td>
<td>46 (41.4%)</td>
</tr>
<tr>
<td>7-9 years</td>
<td>32 (28.8%)</td>
</tr>
<tr>
<td>10-13 years</td>
<td>33 (29.7%)</td>
</tr>
<tr>
<td>Length of education for father</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>12 (10.8%)</td>
</tr>
<tr>
<td>2-6 years</td>
<td>44 (39.6%)</td>
</tr>
<tr>
<td>7-9 years</td>
<td>16 (14.4%)</td>
</tr>
<tr>
<td>10-12 years</td>
<td>34 (30.6%)</td>
</tr>
<tr>
<td>17 years</td>
<td>1 (.9%)</td>
</tr>
<tr>
<td>Not known</td>
<td>4 (3.6%)</td>
</tr>
<tr>
<td>Length of education for mother</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>20 (18%)</td>
</tr>
<tr>
<td>2-6 years</td>
<td>7 (6.3%)</td>
</tr>
<tr>
<td>7-9 years</td>
<td>66 (59.4%)</td>
</tr>
<tr>
<td>10-13 years</td>
<td>14 (12.6%)</td>
</tr>
<tr>
<td>15 years</td>
<td>1 (.9%)</td>
</tr>
<tr>
<td>Not known</td>
<td>3 (2.7%)</td>
</tr>
</tbody>
</table>

The participants came from various experiences including the job they held and their parents’ educational background.

Resilience. The resilience as assessed through CD-RISC 10 is as shown in Table 3. Categories of resilience were applied by using ± 1 SD from Mean to distinguish medium category from low and high categories.

Table 3. Resilience of participants
<table>
<thead>
<tr>
<th>Category</th>
<th>Resilience</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>42 - 50</td>
<td>16 (14.41%)</td>
</tr>
<tr>
<td>Medium</td>
<td>31 - 41</td>
<td>82 (73.87%)</td>
</tr>
<tr>
<td>Low</td>
<td>10 - 30</td>
<td>13 (11.71%)</td>
</tr>
</tbody>
</table>

Independent *t-test* found a significant difference between younger (12 – 14 years old) and older participants (15 – 18 years old) with $M_{younger} = 33.95$, $M_{older} = 37.37$ and $p < .001$. There was no significant gender difference with $M_{boys} = 36.07$, $M_{girls} = 36.17$ and $p < .926$.

**Interviews.** For interviews, three boys were chosen because they were voluntarily willing to participate as other participants had to go back to their job after the educational program ended on that specific day the interviews were scheduled. Their demographic characteristics are as shown in Table 4.

**Table 4. Demographic characteristics of the interviewees**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Participant 1</th>
<th>Participant 2</th>
<th>Participant 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>17 yo</td>
<td>15 yo</td>
<td>17 yo</td>
</tr>
<tr>
<td>Religion</td>
<td>Islam</td>
<td>Islam</td>
<td>Islam</td>
</tr>
<tr>
<td>Cultural background</td>
<td>Java</td>
<td>Sunda</td>
<td>Betawi</td>
</tr>
<tr>
<td>Education</td>
<td>Paket C</td>
<td>Paket B</td>
<td>Paket C</td>
</tr>
<tr>
<td>Job</td>
<td>Pengamen</td>
<td>Car technician</td>
<td>Handbag seller</td>
</tr>
<tr>
<td>Length of being on the street</td>
<td>1 month</td>
<td>2 months</td>
<td>&lt; 1 month</td>
</tr>
<tr>
<td>Resilience score</td>
<td>44 (high)</td>
<td>37 (medium)</td>
<td>35 (medium)</td>
</tr>
</tbody>
</table>

Summary of the interviews is outlined in Table 5. It can be noticed that all interviewees perceived school as providing positive influence and prepared them for a much better future rather than staying on the street.

**Table 5. Resilience characteristics of interviewees**

<table>
<thead>
<tr>
<th>Personal Characteristics</th>
<th>Participant W</th>
<th>Participant E</th>
<th>Participant R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reason to go to street</td>
<td>Parents were <em>kuda lumping</em> performers. Caught off when stole something and put in</td>
<td>Disappointed when parents got divorce. Lived with mother who remarried.</td>
<td>Since 14 years old already selling handbags to help financing his family, when mother was</td>
</tr>
</tbody>
</table>
Since 12 years old, decided to live of the street by himself, regarding it would be excited.

### Negative influence from living on the street

<table>
<thead>
<tr>
<th></th>
<th>Engaged in criminal behavior</th>
<th>Dropped out from school</th>
<th>Smoking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Help and support from parents, school friends, colleagues, teachers having future dreams.</td>
<td>Help and support from mother, school friend, conducive study environment, competent teachers, having future dreams.</td>
<td>Support from mother, school friends and teacher, positive school environment, having future dreams.</td>
<td></td>
</tr>
</tbody>
</table>

### I Have

<table>
<thead>
<tr>
<th></th>
<th>Optimistic, responsible with deeds performed, strong, loving my parents, independent, future oriented.</th>
<th>Optimistic, future oriented, confident, and respect parents.</th>
<th>Quick to react to situations and facing problems, loving and respect mother, future oriented.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solve problems, find help when there’s a problem, get out from self-harming situation, rise from bad experience.</td>
<td>Solve problems, find help when there’s a problem, adapt with new environment, distant self from criminal risks on the streets.</td>
<td>Solve problems, able to split time between working and going to school, find help when there’s a problem, able to choose best solution in facing a problem.</td>
<td></td>
</tr>
</tbody>
</table>

### I Can

<table>
<thead>
<tr>
<th></th>
<th>Making it as a learning process and step to achieve success</th>
<th>Positively by making it as a learning process.</th>
<th>As a reasonable thing to go through because by going through it, the problem will be solved.</th>
</tr>
</thead>
</table>

### Viewing problem

<table>
<thead>
<tr>
<th></th>
<th>Intrinsic: comes from self, to open new chapter, and to have a better life.</th>
<th>Intrinsic: to change life to be better.</th>
<th>Intrinsic: To have diploma to be able to work in a company as a staff.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extrinsic: pushed by parents</td>
<td>Extrinsic: pushed by mother, to make parents happy and not being underestimated.</td>
<td>Extrinsic: to make parents proud.</td>
<td></td>
</tr>
</tbody>
</table>
Changes After Having Received Education

| Changes | Expanded knowledge, having future orientation, certain that education is the bridge to success. | Increased confidence, having future orientation, having motivation amplifier from school environment. | Happier because may supports from school environment and have motivation amplifier to have a better life. |

Future Orientation

| Higher education and become an entrepreneur. | Higher education to be a doctor. | Higher education to be an employee. |

From the interviews it is clear that there are many risk factors that street adolescents face daily. Resilience becomes important to make them survive in preparing future, whatever ideas they have for the kind of future they imagine (Reivich & Shatte, 2002). ‘Street-smart ’ refers to the ability that one has to use a variety of strategies in order to survive in a difficult life as street individuals in the Phillipnes (Banaag, 1997). It seems that the same term can also be applied for street adolescents in Indonesia.

According to Coyle (2010), street children tend to experience stress that can be categorized into two: uncontrollable stress and controllable stress. Uncontrollable stress is caused by factors that are unavoidable such as low economic level of the family, having no home, pressure to join a certain criminal gang. Not much can be done to get rid from uncontrollable stress despite the action, ability and resources that they have. On the other hand, controllable stress can be prevented from happening by applying certain actions, ability or resources. It is very likely that street children and adolescents feel unsatisfied with their life and living condition. Several studies have been done to identify street children and adolescents’ life satisfaction. For instance, Cheng and Lam (2010) find that those living on the street experience low subjective well-being and it is related with low life satisfaction. The following study tried to identify how satisfied street adolescents with their life. As a comparison, another non-street adolescents were also assessed.

Study 3

Part of growing up as adolescents is facing challenges that come from developmental tasks consisting of choosing friends, path of study or academic, conduct, work and romantic that would shape how they will be in the the next ten years (Roisman, Masten, Coatsworth, and Tellegen, 2004). Several studies (see for instance, Greenspoon & Saklofske, 2001; Hudkins, & Shafer, 2011) have found that life satisfaction is important as this can predict social and academic functions of adolescents’ well being in a more positive aspect rather than looking from the psychopathological aspect. Hudkins (2011) found that adolescents with medium up to high life satisfaction are significantly able to achieve better academic and physical health compared to adolescents with low life satisfaction. Having life satisfaction for adolescents is important. Life satisfaction is found related with social adjustment, well being, academic achievement, social, and physical condition (Hudkins & Shafer, 2011).

In positive psychology perspective, life satisfaction is perceived as related with happiness (Diener 2009; Lyubomirsky 2005). Suldo and Huebner (2005) perceive life satisfaction as cognition or ideas that an individual has when evaluating a global evaluation of him- or herself that might include family, friends, and self domain. Basson (2008) found that family, siblings,
friends, school and environment are factors that influence adolescents’ life satisfaction. How these factors play role in influencing Indonesian adolescents’s life satisfaction are not yet known since no reported studies on this topic can be identified. Study 3 aims to explore this topic by comparing adolescents who were enrolled in regular school and those who were enrolled in nonformal. The focus of Study 3 is to identity life satisfaction of adolescents who live on street and enrolled in nonformal educational program as compared with other adolescents living with their family. Adolescents’ life satisfaction is influenced by several factors such as family, siblings, peers, school, self, and living environment (Basson, 2008; Huebner, 2011). Satisfaction with family is strongly related with adolescents’ global life satisfaction and as they grow older, their life satisfaction would also related with other areas such as friends and oneself. Coyle (2010) distinguished between two sources of stress among street adolescents: physical violence that resulted in depression and post traumatic disorder and social and economic problems. Chen and Miller (2001) found that street children would be difficult to feel satisfied because they receive negative treatment in emotional, physical, and social domains, not only from their family but also when they live on the street for being prone to living in hunger, having accidents and being victims for crime.

Method

Participants. Sixty adolescents of 13- to 18 years old participated in this study. Half of them were street adolescents and enrolled in a non-formal school while the rest were in formal school.

Instrumant. Life satisfaction was first assessed by self-report and was applied to quite a range of ages (Compton, 2005). Then Diener constructed Global Life Satisfaction using 5 items. Huebner (2001) constructed life satisfaction measures targeted specifically for children and adolescents. So far, Huebner had developed several life satisfaction measures such as Students’ Life satisfaction Scale with 7 items, Brief Multidimensional Students’ Life satisfaction Scale with 6 items and Multidimensional Students’ Life satisfaction Scale (MSLSS) with 40 items. As MSLSS consists of more dimensions (family, friends, school, living environment, and self), this study used this scale so that a more complete areas of life satisfaction is assessed. Ten of 40 items are unfavorable while the rest 30 items are favorable. It uses Likert-type scale of 4 alternatives.

Results

Demographic characteristics. From 30 participants that comprised non-street participants, 17 (56.7%) were boys. The majority were 13 years old, their parents have jobs as entrepreneurs and have undergraduate degrees. From 30 participants that comprised street adolescents, 16 (54.33 %) were girls. The majority were 15 – 16 years old and were in Senior High School (76.7%). Their parents worked as labor with elementary school as their educational background.

Life Satisfaction. On family dimension, $M_{\text{non-street}} = 24.4$ is significantly higher than $M_{\text{street}} = 21.07$. On friends dimension, $M_{\text{street}} = 26.37$ is significantly higher than $M_{\text{non-street}} = 25.47$. On school dimension, $M_{\text{street}} = 25.63$ is significantly higher than $M_{\text{non-street}} = 21.47$. On living environment, $M_{\text{non-street}} = 25.67$ is higher than $M_{\text{street}} = 25.03$. On self dimension, $M_{\text{non-street}} = 22$ is higher than $M_{\text{street}} = 21.20$. 

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Discussion

Street adolescents have low life satisfaction on family, living environment and self, but high satisfaction on friends and school. Personal interviews with staff who work among street adolescents reveal that street adolescents were in fact have low self-esteem. Rosenberg (1965) views self-esteem as a positive or negative attitude toward oneself. Feedback that one receives from other people especially significant others is an key factor in self-esteem. This might be one reason why they kept going back to streets rather than going to institution that may help them preparing a better future by providing vocational program. To identify how street adolescents view themselves, Study 4 was carried on.

Study 4

Nwanko, Obi, and Agu (2013) find a significant relationship between self-esteem and achievement motivation among adolescents. This study aims to find whether a significant relationship between self-esteem and achievement motivation is found among street adolescents who are already involved in nonformal education. The street adolescents who become the focus of this study are categorized as children on the street.

Method

Participants. Fifty eight street adolescents took part in this study. They were all enrolled in a non formal school.

Instrument. Rosenberg Self-esteem Scale (RSES) (Rosenberg, 1965) and Achievement Motives Scale-Revised (AMS-R) (Lang and Fries, 2006) were used. AMS-R consists of two aspects: hope of success assessed by 5 items and fear of failure, also consists of 5 items.

Results

Tabel 4.1 Demographic characteristics

<table>
<thead>
<tr>
<th>Demographic characteristics</th>
<th>Category</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>11-14 yo</td>
<td>32 (55.2%)</td>
</tr>
<tr>
<td></td>
<td>15-17 yo</td>
<td>14 (24.1%)</td>
</tr>
<tr>
<td></td>
<td>18-20 yo</td>
<td>12 (20.7%)</td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
<td>35 (60.3%)</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>23 (39.7%)</td>
</tr>
<tr>
<td>Living condition</td>
<td>Alone</td>
<td>1 (1.7%)</td>
</tr>
<tr>
<td></td>
<td>With family</td>
<td>51 (87.9%)</td>
</tr>
<tr>
<td></td>
<td>In institution</td>
<td>5 (8.6%)</td>
</tr>
<tr>
<td></td>
<td>With home owner</td>
<td>1 (1.7%)</td>
</tr>
<tr>
<td>Parent’s job</td>
<td>Seller</td>
<td>26 (44.8%)</td>
</tr>
<tr>
<td></td>
<td>Labor</td>
<td>17 (29.3%)</td>
</tr>
<tr>
<td></td>
<td>Housewife</td>
<td>5 (8.6%)</td>
</tr>
<tr>
<td></td>
<td>Savage</td>
<td>4 (6.9%)</td>
</tr>
</tbody>
</table>
Self-esteem. Girls have higher self-esteem than boys with $M_{girls} = 30.04$ and $M_{boys} = 28.43$. But the difference is not significant ($t = 1.946, p = .057$). $M_{total} = 29.07$ and $SD = 3.231$. Among three age groups, early adolescents have higher score (with $M = 29.84$) than middle adolescents ($M = 28.00$) late adolescents ($M = 28.25$). Further analyses of variance across age groups did not reveal any significant difference with $F = 2.251$ and $p = .115$. Scores of self-esteem are quite spread out. Using mean and ± 1 SD as the medium category that consists of 62.1% the total sample, 20.7% can be categorized as having a high self-esteem while 17.2% have low self-esteem. Interestingly, there are gender differences across categories of self-esteem as shown in Table 11 below.

Table 11. Scores of self-esteem between gender in each age group

<table>
<thead>
<tr>
<th>Gender</th>
<th>Low (10-25)</th>
<th>Medium (26-31)</th>
<th>High (32-40)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td>6</td>
<td>27</td>
<td>2</td>
</tr>
<tr>
<td>Girls</td>
<td>4</td>
<td>9</td>
<td>10</td>
</tr>
</tbody>
</table>

The majority of boys have medium self-esteem and there were more girls than boys with high self-esteem.

Achievement motivation. Scores of achievement motivation as reflected in hope of success and fear of failure can be seen in Table 12.

Table 12  Achievement motivation scores

<table>
<thead>
<tr>
<th>Achievement motivation</th>
<th>n</th>
<th>$M$</th>
<th>Range</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>hope of success</td>
<td>58</td>
<td>16.67</td>
<td>12 – 20</td>
<td>1.669</td>
</tr>
<tr>
<td>fear of failure</td>
<td>58</td>
<td>12.53</td>
<td>6 - 19</td>
<td>2.522</td>
</tr>
</tbody>
</table>

Mean for hope of success is higher than Mean for fear of failure, indicating that participants are more inclined to hope of success than fear of failure. Further analyses on gender differences for hope of success and fear of failure did not reveal any significant differences. But a significant difference was found across age groups on fear of failure and not on hope of success as shown in Table 13.

Table 13  Achievement motivation in each age group

<table>
<thead>
<tr>
<th>Achievement</th>
<th>Age group</th>
<th>$M$</th>
<th>$F$</th>
<th>$p$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>motivaton</td>
<td>Early</td>
<td>Middle</td>
<td>Late</td>
<td>t-value</td>
<td></td>
</tr>
<tr>
<td>-----------------</td>
<td>-------</td>
<td>--------</td>
<td>------</td>
<td>---------</td>
<td></td>
</tr>
<tr>
<td>Hope of success</td>
<td>16.59</td>
<td>16.57</td>
<td>17.00</td>
<td>1.365</td>
<td></td>
</tr>
<tr>
<td>Fear of failure</td>
<td>11.53</td>
<td>13.86</td>
<td>13.67</td>
<td>2.140</td>
<td></td>
</tr>
</tbody>
</table>

Fear of failure scores from middle adolescents is significantly higher than from early adolescents but no other differences were found significant.

**Relationship between self-esteem and achievement motivation.** It can be interpreted that variable self-esteem and hope of success has positive relationship. The correlation coefficient between self-esteem and fear of failure is $r = -.430$ with $p= 0.01$. It can be interpreted that variable self-esteem and fear of failure has negative relationship hence the higher the self-esteem the lower the fear of failure.

**Discussion**

Street teenagers are in different conditions from regular teenagers. Their backgrounds tend to be harder with more challenges and obstacles encountered on the streets. They are demanded to fulfill teenagers development tasks especially the task to develop intellectual capability to obtain jobs and better futures. Therefore, this research wants to know the correlation between self-esteem and achievement motivation in street teenagers.

The result shows that there is a significant correlation between self-esteem and achievement motivation. This result is consistent with what was expected and supported by previous research by Nwanko, Obi and Agu (2013) that there is a significant correlation between self-esteem and achievement motivation. The result of data analytic above shows a significant role between self-esteem towards achievement motivation. This means the high and low of achievement motivation is affected by the high low of self-esteem. The result is also similar with previous research towards street child that went to Master Junior High School, that there was a positive relationship between street child’s pride and achievement motivation. Subjects with better perseverance will have self-confidence in his or her abilities to finish school works or participate in school subjects. This shows that subject had motivation to keep on achieving. On the other hand, subject with less perseverance will lack in self-confidence resulting in drop out and returning to the streets because it was perceived easier and freer. This shows that subject had low motivation achievement. Coopersmith (1990) stated that teenagers with high self-esteem will be more motivated to achieve success in their lives. Successful experience by teenagers might give large contribution in increasing self-esteem. Bachman & O’Malley (1977) in their research found that during teenage years, the high academic abilities and performances are predictors of high self-esteem (Adam & Gulbta, 1983). While Subowo & Martiarini (2009) stated that achievement motivation and pride have positive correlation.

Achievement motivation seen from the value hope of success has significant relationship with self-esteem on street teenagers. Correlation relation between self-esteem and hope of success tends to be positive. Which means, the higher self-esteem one has, the higher hope of success in said person, and vice versa. Previous research by Viola (2014) explains intrinsic motivation that forms the background for street children to obtain education is self-motivation to change for a better life to achieve higher education and dream job. This result can be explained
based on theory put forward by Manning (2007) and Erol & Urich (2011) in their research explained that self-esteem of teenagers is also influenced by their achievement in school. Good achievements make teenagers feel in control of challenges or obstacles as well as enabling them to master certain subject or competency (sense of mastery) which make self-esteem to be more positive. One characteristic of an individual with high motivation is to make sure that to finish the task (Heckausen, 1991). When connected with the result of the research, motivation to achieve success gives contribution to self-esteem of the street adolescents. However, weak correlation strength shows that hope of success is not the main contributor to increase self-esteem in street teenagers. Therefore, high self-esteem is a factor that cause good performance and corrects early achievement motivation (Nwanko, Obi, and Agu, 2013).

The correlation between self-esteem and fear of failure show a negative significant correlation between self-esteem and fear of failure. This result differs from what Guindon (2010) explained that an individual with high self-esteem tends to find a way to develop self, while those with low self-esteem tend to find a way to protect themselves, try not to make mistakes, and avoid risk taking. However, according to Elliot and McGregor (1999) people with high motivation to avoid failure would self-evaluate in a more negative way after done with a task that is related to achievement. In this research, it can be said that high motivation to avoid failure in street adolescents contributed in lowering their self-esteem.

Self-esteem is an important component for almost everyone, especially adolescents. Not only it will help in academic performance, it also supports social skills and makes it easier to have good social relationship with their friends. Feeling good about oneself might be able to increase motivation achievement in adolescents. Building trust by encouraging them to be successful and giving positive feedback along with praises, are important tools for teachers as well as family in building self-esteem. Self-esteem is an important component for almost everyone. Not only it supports academic performance, it also creates good social skill. Self-esteem will always be needed in our lives (Nwanko, Obi, dan Agu, 2013). With increased achievement motivation in hoping for success, street adolescents are more likely to attend schools and leave street lives.

Seen from domains rated, self-esteem is divided by rating self-esteem specifically and globally. Self-esteem as a specific is rated by how individuals see themselves in various domains (Adams & Berzonsky, 2003). Heatherton and Wyland (2003) divided specific self-esteem domain into three specific domains, which are performance self-esteem, social self-esteem and physical self-esteem. Each domain reciprocally interacts and has various influences over time in each individual. There is an individual who sees importance in achievement domain, and other individual who sees importance in social relationship with others. Self-esteem as a global is a trait or tendency that relatively stays, long lasting, and includes total perspectives ideas by various domains inside an individual (Rosenberg in Guindon, 2010). This approach does not calculate competencies in a specific domain such as academic, athletic and social domain. Self-esteem as a global assumes that individuals summarize self-assessment from various domains and each domain is as important in forming self-esteem. In this research, self-esteem is rated by rating domain as a global.

**Practical suggestion in dealing with street children and adolescents**

Several suggestions as the implications of the studies reported here can be forwarded as follows:
1. Provide educational programs as interesting experience for street adolescents so they can enjoy being there. This can include building strong and trust relationship between the instructors or teachers and the students, in this case, street adolescents.

2. Encourage street adolescents to develop and identify their talents in a variety of areas and arts. This will help boost their self-esteem.

3. Provide discussion about meanings of life and how important is to live in a good condition, as this will create a willingness in the street adolescents to achievement a better future, including preparing skillful experiences to engage in decent jobs.

4. As families become one of the risk factors that create street children, parents from low economic and educational level should be empowered to build preparation and develop understanding on how to best nurture their own children, since in the long run, every one should be guaranteed to have a descent life, not on the street any longer.

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Subjectivities of Sexual Harassment at Workplace

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ABSTRACT

“Sexual harassment includes any unwelcome acts or behavior (whether directly or by implication) such as physical contact and advances, a demand or request for sexual favors, making sexually colored remarks, showing pornography or any other unwelcome physical, verbal or nonverbal conduct of sexual nature” [Sexual Harassment of Women at Workplace(Prevention, Prohibition and Redressal) Act, 2013]

Sexual harassment is an illegal and unethical practice which is rooted in our cultural and social practices across the globe. It exists in almost all kinds of institutions in day to day interactions in one or other form defined by the particular organization where the person is working or law of the land where the person is geographically situated. Sexual harassment lies in the context of sex discrimination and inequality of opportunity in the workplace and varies from time to time and country to country. Sexual harassment lies in the context of sex discrimination and inequality of opportunity in the workplace.

Notions of what constitutes sexual harassment are not uniform; but vary across different cultures, religions, societies and gender etc. Consequently, perceptions of what is appropriate and what is not will vary. What may be interpreted as sexual harassment by a man or woman in one culture, religions or society will be different from what is interpreted by a man or woman in others.

However, I am interested in how despite these subjectivities there lies a universal perception of sexual harassment as “unwelcome, sexual advances”. The paper intends to uncover these ambiguities and propose amicable solutions for eliminating harassment and discrimination and make the world a better place to live for.

1. INTRODUCTION

ेश्वल harassment is one of a range of abusive behaviors which include general bullying, mobbing, racial harassment and sex-based harassment such as verbal put-downs, abusive remarks and marginalizing exclusionary behaviors by gender. It has hierarchical power relations at their core (Thornton 2002; Zippel 2006; MacDonald, 2012). Sexual harassment has an explicit sexual dimension in contrast to other abusive workplace behaviors and also different from harassment based on race or disability in that the conduct may be excused as welcome attention (Ibid). Also, sexual harassment can be understood as a psychological construct by the recipient as unwanted sex-related behavior at the workplace which is offensive and threatening. (Fitzgerald et al., 1997, p.15; MacDonald, 2012). Sexual harassment often causes significant psychological, health and job related consequences and also effect on the production and reputation of the organization.

Many developed and developing countries like US, UK, Australia, France, and India ban sexual harassment legislation. In the US, sexual harassment is covered under Title VII Civil Rights Act 1964 case law and policy guidance by the Equal Employment Opportunity Commission (EEOC). Sexual harassment was outlined in some paragraphs of the Sex Discrimination Act 1975, under lawful discrimination on the grounds of sex in the United Kingdom until 2005 and currently, it is explicitly mentioned in section 4A of the Act. In Australia, sexual harassment covered by federal Sex Discrimination Act 1984 and by state based anti-discrimination legislation (MacDonald 2012).

In this paper, sexual harassment refers to workplace sexual harassment.


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In the context of India, a petition was filed in the Supreme Court to enforce the fundamental rights of working women, after the brutal gang rape of Bhanwari Devi, a social worker from Rajasthan in 1997. The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 was enacted as a result of the landmark judgement of the Vishaka case and others vs State of Rajasthan wherein it was mandated for every employer to provide mechanism to redress grievances pertaining to workplace sexual harassment and enforce gender equality of working women (Handbook on Sexual Harassment at Workplace, 2015).

Sexual harassment is an illegal and unethical practice which lies within the broader context of sex discrimination and inequality of opportunity in the workplace. Sexual harassment is also entrenched in cultural practices and is deteriorated by power hierarchy at workplace (Tejani, 2004).

Sexual harassment is related to power, privilege and control through sex. Sexual harassment has been experienced by both women and men in different kinds of organization. In our patriarchal society, victims of sexual harassment are mostly women because large numbers of men are in higher positions of power. Men in higher positions are the potential sexual harasser who takes the advantage of their power and positions to harass their female subordinates. Sexual harassment also occurs among co-workers where harasser does not have authority of power (Altman & Kumalo, 1995).

While there is no universal definition of sexual harassment, most acts embodies similar elements such as descriptions of the conduct as unwanted or unwelcome that has the intent of being intimidating, hostile, degrading, humiliating or offensive etc.

The paper attempts to understand the phenomenon of sexual harassment at workplace and explore its various aspects to uncover the subjectivities of sexual harassment in order to find amicable solution to make the workplace suitable for all gender. Therefore, this review based paper highlight on the following broad themes.

**SECTION-I**

- Overview of sexual harassment
- Behaviors associated with sexual harassment
- Consequences of sexual harassment at workplace

**SECTION-II**

Mere understanding of the concept of sexual harassment and its various aspects such as overview, behaviors, and consequences of sexual harassment is limited to capture the subjective nature of the term. Therefore this section brings out different perspectives to understand the perceptions on sexual harassment in order to reach an agreement on the prevention of sexual harassment.

- Perceptions of sexual harassment
- Preventive measures to sexual harassment

**2. SECTION-I**

**2.1. Overview of Sexual Harassment**

There is no simple definition to outline the term sexual harassment but what is clear about the term is that

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86 Vishaka is a women’s organization in India.
it is an illegal and unethical act. The EEOC (Equal Employment Opportunity Commission) guidelines 
(1980) defined sexual harassment:

Unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a 
sexual nature when (i) Submission to such conduct is made either explicitly or implicitly a term 
or condition of an individual's employment, or (ii) Submission to or rejection of such conduct by 
an individual is used as a basis for employment decisions affecting such individual, or (iii) Such 
conduct has the purpose or effect of unreasonably interfering with an individual's work 
performance or creating an intimidating, hostile, or offensive working environment. (Federal 
Register, 1980; Crain & Heischmidt, 1995)

The EEOC definition distinguished two types of sexual harassment at workplace such as quid pro 
quo harassment and hostile environment harassment (Green law and kohl, 1992; Crain & Heischmidt, 1995).

Quid pro quo harassment involves sexual threats or bribery that make an employee to choose between 
giving into to superior sexual demands or forfeiting an economic benefit such as salary increase, 
promotion, continued employment etc. (Keyton & Rhodes; 1997; Welsh, 1999). It occurs when victim of 
harassment seeks to gain employment, retain a job, be promoted or secure a pay increment.

A hostile environment harassment involves behaviors such as sexual jokes, comments, and touching 
which create an intimidating, hostile or offensive working environment and interfere individual’s ability 
to work (Keyton & Rhodes, 1997; US EEOC 1980; Welsh, 1990). A hostile environment also created by 
visual or verbal forms of sexual harassment.

2.2. Behaviors Associated with Sexual Harassment

Any offensive or unlawful behavior which is sexual in nature is called sexual harassment. Behaviors 
which constitute sexual harassment may ranges from slight unwelcome attention of a sexual nature to 
absolute violent behavior such as rape. Behaviors which give rise to sexual harassment are diverse and 
ranged from requests for socialization or dates, personal insults and ridicule, leering, offensive comments 
and non-verbal gestures to sexual propositions and sexual and physical assault (Bastian et al. 1996; 
Canadian Human Rights Commission 2006; Gelfand et al. 1995; MacDonald, 2012). Behaviors of sexual 
harassment can be categorized as verbal, non-verbal, physical and coercive behaviors etc.

Verbal or non-physical behaviors of sexual harassment include as leering, sexual teasing, jokes, verbal 
remarks on their physical appearance (like the size of women’s breasts and buttocks), requests to see parts 
of their bodies, offensive language, comments of a degrading nature; and gestures (visual forms) such as 
displays of offensive, sexual explicit materials and insensitive questions about private life, sexual matters 
or appearance (AHRC 2008; Berdahl and Aquino 2009; Fitzgerald et al. 1997b; Hayes 2004; Magley et 
al. 1999; MacDonald; 2012).

Non-verbal or physical behaviors of sexual harassment contain kissing, cuddling, massaging, touching, 
pinching, grabbing, biting, bra-flicking, hitting, licking, groping, removing clothes, spitting and attempted 
rape (AHRC 2008; Hayes 2004; MacDonald; 2012).

Coercive behaviors which consist sexual threats and sexual force. The sexual force include offers of 
rewards such as bonuses, pay increases, options of extra work and promotion; and sexual threats are 
withdrawal of financial or other entitlements, reductions in work hours, dismissal or other threats of life 
being made difficult (Fitzgerald et al. 1997a; MacKinnon 2007; McDonald et al. 2008).

2.3. Consequences of Sexual Harassment

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Sexual harassment has very adverse effect on the workplaces and its employees’ morale. It creates an unpleasant work environment not only for the victim (employee) but also for co-workers who feel uneasy as powerless as witnesses. Sexual harassment can worsen the workplace environment and employee self-esteem and motivation. Various studies summarize the job related, psychological and health consequences of sexual harassment (Welsh, 1999).

In terms of job-related consequences, sexual harassment causes absenteeism and lowered morale or self-esteem of victims. It also decreases job satisfaction among employees and diminish the perception of equal opportunity and deteriorate the interpersonal work relationship (Culbertson et al 1995; Welsh, 1999).

Psychological and physical health consequences of sexual harassment incorporate suffering from anxiety, depression, sleep disturbances, nausea, stress and headaches etc. (Crull 1982, Fitzgerald 1993, Gutek & Ko 1993; Welsh, 1999). Sometimes, victims are so traumatized by the harassment that they suffer from serious emotional and physical consequences which make them unable to perform their job properly and execute indirect pressure to leave the job.

Sexual harassment diminishes the employee’s reputation and organization as well. Organizations experiencing sexual harassment has to deal with the problems of higher absenteeism, lack of motivation, 92 employees and loss of employees. It may also be obligated for the organization to make executive decisions that could temporarily affect productivity, i.e., transfers, dismissals, revised or modified tasks, etc., thus losing revenue and competitiveness. The organization may also lost confidence in its ability to provide comfortable and safe environment for employees. The organizations have to spent time on responding complaint investigators and lawyers and pay costs for harassment in terms of lost productivity, job turnover and medical claims.

. SECTION-II

3.1. PERCEPTIONS OF SEXUAL HARASSMENT

Outlining the definition, types, characteristics and consequences is not enough to understand or comprehend the concept sexual harassment. Sexual harassment is perceived differently by different persons based on the gender, ethnicity, culture etc. Each person has different perspectives towards what composes sexual harassment because of character of being uniqueness. Even under same circumstances, interpretation of different individual on the same behavior might be totally different. Each situation varies depending on facts and the nature of relationships between harasser and harassed and all these together determine whether particular behavior is perceived as offensive/ unwelcome or not. As Jayashree (1999) has argued, “a major obstacle, which complicated the issue, is that men and women tend to have different perspectives concernit what constitutes sexual harassment.” She also said that “the behaviors like Wolf-whistles, lewd remarks and other forms of overt behavior etc. are no longer acceptable in workplaces which could be considered/accepted by girls in schools or colleges”.

Sexual harassment is often regarded as a gendered perception. Males are often considered as “stronger” gender while Females being portrayed as the “weaker” gender are often seen as the victims of the sexual harassment. Yee at al. (2015) argued that in respect of reporting cases of sexual harassment there a significant gender differences, even though boys and girls report similar rates of harassment. Girls are more likely to express their experiences of sexual harassment and ask the harasser to stop. Boys more often ignore the sexual harassment incidences compared to girls (Yee at al., 2015). Even, men categorize fewer types of behaviors as harassment (Jayashree, 1999).

Perceptions towards the complainants also varies based on the gender. Individuals are less tolerant of sexu
harassment when the victim is female rather than male. Research found that men who accused of sex harassment were less trusted, hated and punished more than women accused (MacDonald, 2012). There is strong tendency to believe and prefer female complainants when they are perceived as physically attractive (Golden et al. 2001; Madera et al. 2007, MacDonald, 2012); while married and unattractive men are more likely to see as harasser (MacDonald, 2012).

There is a dearth of literature that talks about same sex harassment where the harasser and the harassed are of the same gender. The perceptions on sexual harassment of same sex has given very less importance compared to heterosexual harassment.

With respect to reporting of cases, many studies have shown that in most of the cases of sexual harasser the victims do not report the case because of their fear of losing their jobs, fear of negative reaction from the husbands and loved ones and they also thinks that they would not be trusted. The other factors which discourage reporting of sexual harassment cases includes fear of retribution or retaliation, unwillingness to viewed as a victim, self-doubt or the fear of being seen as too sensitive, the belief that the harasser will receive any penalty, lack awareness of rights, and lack of access to external supports such as unions, counselling professionals (Dziech and Hawkins 1998; Fielden et al. 2010; Hayes 2004; Wear et al. 2007; MacDonald, 2012).

Williams (2002) give another explanations to answer the question, “Why are so many women reluctant to label their experiences as sexual harassment?” One explanation of women’s reluctance to report sexual harassment cases is popular among some feminist researchers is that women subjected to these behaviors a too oppressed, hopeless, or brainwashed either to recognize the problem or to do anything about it (Williams, 2002).

In addition, Williams (2002) brings out a new dimension of women’s reluctance to report cases of sexual harassment. He said: “Sexual interactions can be both empowering and diminishing to women. Workers who are subjected to sexual innuendos, requests, and touching may feel simultaneously degraded and admire and they may respond with both shame and longing. Confronted with these contradictory feelings, it is not surprising that some people would be hesitant to label their experiences as sexual harassment” (Williams, 2002, p.100).

There is a need to highlight on the special cases of women students and workers who consent to their sexual subordination. As argued by Adrienne Rich (1980), compulsory heterosexuality exists in our society, and it enforced by male supremacy over women in all the major social institutions, including majority workplaces. It is interesting to explore the specific cases where women are not forced into sexual subordination but rather voluntarily submit to relationships of erotic domination? However, investigating the internal side of sexual harassment is a potentially dangerous move for feminists because it may seem to justify male violence over women (Williams, 2002).

3.2. Preventive Measures to Sexual Harassment

The prevention and combating of sexual harassment is must for organizations to create a suitable work environment. Sexual harassment at workplace is a widespread problem which often has negative impact on employees’ emotional, social and physical well-being which also leads to damage in organizations productivity and reputation.

In order to prevent sexual harassment at first hand, awareness generation through training and counseling among the employees and employers about sexual harassment and its negative consequences is the most effective strategy. Research revealed that lack of understanding and awareness of what constitutes sexu
harassment have made the youth easy targets of perpetrators (Yee et al., 2015). Thus, potential perpetrators could be stopped to their sexual behaviors by generating awareness about the effect of sexual harassment. Likewise, potential victims could be trained in assertiveness to stand and raise voice against sexual harassment. The organization should discourage hostile behavior and sexual harassment through developpit policies and procedures and also provide guidelines for employee’s response to sexual harassment. To do with the issue, most organization set ups sexual harassment policies, Internal Complaints Committee (ICC complaint procedures, and statements about the organization’s lack of tolerance for sexual harassment.

Regarding the ban on sexual harassment at workplace, Levins (1992) in his article “Best policy to Ban Harassment” suggested several important policy implications. Some of the notable implications are: tl policy must have a strong positive statement that sexual and other harassment will not be tolerated; tl designation of specific persons or classes of persons (both males and females) to whom incidences of sexu and other harassments should be reported; the policy must have certain procedures to follow durit investigation of harassment complaints; the policy should give assurance to confidentiality and a commitme to investigate the sexual harassment complains quickly and systematically; Protection of victim from tl retaliation of making a harassment complaint (Crain & Heischmidt, 1995).

. CONCLUSION

Now, the question is, “How can policies be designed to acknowledge the subjective nature of sexual harassment and prevent it occurrence?” There is a need of effective implementation of sexual harassment policies to acknowledge the ambiguity of sexual harassment. A meaningful sexual harassment poli attempts to empower employees so that employees feel secure enough in their own boundaries to sta against sexual harassment and discrimination. The employees must feel free and realize their rights at entitlements as individuals deserving of respect and dignity to set their own limits. The policy has provide all necessary supports for employees who are afraid of losing their jobs, and who are constant subjected to degrading attitudes from their superiors.

Policies against sexual harassment should also be designed to enhance the self-respect of employees. Tl policies acknowledge the ethical worth of all individuals, and all should have the freedom and the right pur sue sexual desires as long as the sexual needs and desires of others are appreciated and honored. Legal guarantee the right to sexual autonomy could also be an effective approach to eliminating sexual harassment.

Moreover, mutual recognition among employees and employers is crucial to combat the widespread sexual harassment and all kinds of discrimination at workplaces. Commitments to sexual autonomy, respect at dignity of employees, and the values of democracy and equality are some of the conditions necessary for tl achievement of mutual recognition. In addition, to promote the possibility of mutual recognition organizations have to develop encouraging characteristics such as flatter hierarchies, democrat participation, job security, just rewards and equitable punishments, an acknowledgment of mutu dependency, and a more trusting attitude between supervisors and employees. Organizations have also promote greater autonomy and self-respect among the employees, to make them less vulnerable to sexual harassment.

At last but not least, sexual harassment at workplace is insensitive, intimidating and dangerous. It affec employees as well as organization and undermines union solidarity. Because of its subjective nature, tl different perceptions of sexual harassment demands for specific interventions and training programm which are appropriate to different gender, ethnic and racial groups. Thus, appropriate intervention w
enable employees to manage, minimize and prevent future sexual harassment. It will help employees overcome from the feelings of victimization and they could resist against uncertainty of sexual harassment and subordination which effects individuals, workplaces and society at large. Thus, preventing sexual harassment, a form of violation of human rights is essential make a suitable workplace based on equality of all genders and free from all kinds of harassment to create a better world for all at large.

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Problematic Aspects of Protection of Right to Life in the Context of Armed Conflicts

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ABSTRACT

The right to life possesses certain priorities as the most important law: without ensuring its proper fulfillment there is no actual sense to talk about other rights and freedoms. It is especially important in the context of armed conflicts, when compliance with right to life becomes more difficult, but at the same time, more vital to ensure. This paper examines problematic aspects of right to life as a fundamental human right, in particular, from the point of view of international humanitarian law - in the context of armed conflicts. Another, major area for discussion is legal basis for a combatant to kill during an armed conflict, allowed and forbidden means and methods of warfare in this context and prohibition of indiscriminate attacks. The primary aim of this paper was to examine, summarizing international humanitarian rules, contracts, case law of international tribunals and national courts, the existing vulnerabilities and weaknesses of the protection of right to life in the context of armed conflicts and to identify possible solutions. The secondary aim was to outline the legal status of combatants in armed conflicts in terms of their right to kill during armed conflicts. The comparative legal analysis of the legislation of different countries and also provisions of the international statutes was carried out. It was found that the issues arising out of the protection of right to life in the context of armed conflicts could be improved, taking into account that most of the legal documents regulating relevant issues were adopted relatively long ago. Nowadays means of methods of warfare have drastically changed. It would be important to update international humanitarian rules in order not to leave unregulated gaps in modern warfare. Such perspective could provide further incentive for international humanitarian law.

1. INTRODUCTION

The right to life possesses certain priorities as the most important law: without ensuring its proper fulfillment there is no actual sense to talk about other rights and freedoms. It is especially important in the context of armed conflicts, when compliance with right to life becomes more difficult, but, at the same time, more vital to ensure.

Being a fundamental human right, the right to life often becomes scholar’s study object (International law: manual for university students, Jherebtsov, 2001; International humanitarian law, Gnatovskyi, Korotkyi, Hendel, 2015). A big question exists in the context – if the right to life is absolute or not. To some extent, the right to life cannot be considered absolute as some countries still have legal exceptions to this right nowadays. Although most nations have abolished capital punishment, over 60% of the world's population live in countries where capital punishment is legally allowed by national legislation and where executions as punishment take place, such as China, India, the United States, etc. The imposition of the death penalty - while prohibited in some areas of the world - is not yet universally considered a violation of the right to life, provided that the crime is sufficiently serious, due process rights are respected, and the method of execution is not particularly cruel.

Apart from that, the difference of right to life in general (mostly, from the civil law point of view) and in the context of armed conflicts and wars was not examined thoroughly in literature. In this paper a lot of attention is paid to these issues.

This paper examines problematic aspects of right to life as a fundamental human right, in particular, from
the point of view of international humanitarian law - in the context of armed conflicts. Another major area for discussion is legal basis for a combatant to kill during an armed conflict, allowed and forbidden means and methods of warfare in this context and prohibition of indiscriminate attacks.

This study will be examining the legal regulation existing in the current legal framework and customs in areas of international law concerning compliance with right to life in the context of armed conflicts. This study will also be beneficial in contribution to finding the most balanced approach to legislative regulation of the problems presented therein. It will also serve as a future reference for researchers on the subject of international humanitarian law.

2. METHODS
Research methods:
1) The comparative method was being used to examine and compare the different approaches adopted by various international and national tribunals;
2) Critical analysis method is used to evaluate current legal framework, customary regulation and legal gaps in cases of guaranteeing the compliance with right to life in armed conflicts;
3) Analytical method is invoked by assessing the content of treaties, customary law and principles and their application in practice.

2.1. Legal basis for a combatant to kill during an armed conflict
The right to life is not an absolute right without limitations. There are specific restrictions (exceptions) to the scope of this right; human life cannot be intentionally terminated, aside from exceptional conditions (Article 2, European Convention for the Protection of Human Rights and Fundamental Freedoms (further – “the Convention”)). Wars and armed conflicts are considered to be exceptional conditions, usual rules do not apply when they occur. In such conditions, international humanitarian law aims to ensure the proper fulfillment of human rights. Violations of international humanitarian law (e.g. use of prohibited weapons resulting in death, or disregard for civilian loss of life) and of international criminal law (e.g. genocide) often involve violations of the right to life. In the context of armed conflicts and wars additional attention is paid to ensure non-violation of the right to life. It may sound absurd at first, as it is inevitable that killings occur during any wars. Of course, in our modern world war is forbidden. Article 2(4) of the Charter of the United Nations states clearly that the threat or use of force against other States is unlawful. Since 1945, war has no longer been an acceptable way to settle differences between States. However, wars do in fact occur, despite their being outlawed by the Charter of the United Nations. Armed conflicts are a sad reality in our contemporary world. That is why there is a need for international rules which limit the effects of war on people and property, and which protect certain particularly vulnerable groups of persons – the international humanitarian law, as its main expression and an important body of customary law as a decisive supplementary source of law.

Rule 89 of customary IHL (Customary International humanitarian law database) states: “Murder is prohibited”. This customary rule shows best what focus is made to ensure non-violation of right to life in armed conflicts. It is important to note, first of all, that this rule refers to non-combatants – persons who do not take active part in an armed conflict. Thus, it is completely forbidden to kill civilian population and other non-combatants (prisoners of war, persons who stopped taking active part in an armed conflict due to whichever reasons). State practice establishes this rule as a norm of customary international law applicable in both international and non-international armed conflicts.

The main problematic aspect in this context is related to legal derogations from “Murder is forbidden” rule. Exception to the principle of the right to life is embodied in paragraph 2 of Article 15 of the Convention. According to its Article 15(2), death as a result of actions of war that are in accordance with the law are not considered a breach of the right to life, as foreseen in Article 2 of the Convention.
In international armed conflicts, combatants are entitled to directly participate in hostilities. In other words, they are permitted to commit lawful acts of war intended to achieve a military goal in the most effective way. The principle of distinction, however, requires that such acts of war be directed only against enemy combatants and military objectives, while preventing unnecessary and excessive damage to civilians. Therefore, implementation of the principle of distinction demands a clear definition of persons and objects that may be legally targeted. Insofar as persons are concerned, enemy combatants are members of the armed forces of a party to a conflict (except for medical personnel and chaplain). Persons who are not members of the armed forces are civilians and therefore shall not be the object of attack. There is one exception, however: civilians directly participating in hostilities - either individually or as part of a group - become legitimate targets of attack, though only for the duration of their direct participation in hostilities.

As far as objects are concerned, military objectives are defined through a two-pronged test: the object to be attacked must by its nature, location, purpose or use contribute effectively to the military action of the enemy and its partial or total destruction, capture or neutralization, must offer - in the circumstances ruling at the time - a definite military advantage. All objects which do not fall under the definition of a military objective are civilian objects and shall not be attacked.

IHL includes a number of corollaries to the principle of distinction in order to secure the protection of civilian persons and objects. For example, it stipulates that combatants in an international armed conflict are required to distinguish themselves from the civilian population (normally by wearing a uniform) while they are engaged in an attack or in a military operation preparatory to an attack. In addition, IHL prohibits indiscriminate attacks and provides the principle of proportionality, which dictates that the so called “incidental loss” of civilian life and/or property should not be excessive in relation to the concrete and direct military advantage anticipated. In order to implement the restrictions and prohibitions on targeting, specific precautions must also be observed by all Parties to an armed conflict.

Finally, the rules on the conduct of hostilities also grant a specific protection to some objects, including cultural objects and place of worship (such as historic monuments), objects indispensable for the survival of the civilian population and works and installations containing dangerous forces (namely dams, dykes and nuclear electrical generating stations). Means and methods of warfare with the potential to cause widespread, long-term and severe damage to the environment are prohibited as they threaten the health and survival of the civilian population.

Under all four treaties the right to life is non-derogable. The Convention does make an exception for “deaths resulting from lawful acts of war”. So far this exception has not been used, despite the fact that the European Court has heard a number of cases relating to deaths during hostilities. No state has so far tried to use this exception when depositing its notice of a state of emergency. In cases relating to armed hostilities between rebels and governmental forces, the treaty bodies have examined whether sufficient precautions were taken to avoid civilian casualties.

The courts’ practice establishes the principles of legitimate application of force which might violate the right to life. For example, the European Court of Human Rights has seized the opportunity to reveal its opinions on Article 2 of the Convention through a decision rendered on September 27, 1995 (série A n°324) in the “Mc.Cann v. United Kingdom case”, regarding the killing, by British soldiers, of three IRA members on the suspicion of having committed an assassination. According to the said decision of the Court constituted the following points:

1) A consequential and extensive investigation into the legality of actions is called for in the event of death as a result of force applied by state troops. A state’s obligation to protect the lives of its subjects requires such an investigation.
2) There should be an equitable balance between the scope of using force and the benefits intended to be preserved. If there are justifiable reasons to use force simply on the appearance (style of occurrence) of
an event, state troops resorting to force is not considered unwarranted, even under circumstances where the outward appearance of the event is later proven to be a misleading one.

3) The existence of a balance between the benefit intended to be preserved and the force applied is not sufficient alone to deem the event of death acceptable within the scope of Article 2 of the Convention. State forces, during the operation, are obligated to take measures that will minimise the occurrence of death as a result of using force”.

It should be noted that these grounds for the possible use of force are alternatives and not cumulative. Therefore the possible use of force is not limited to the imminence of the threat but to the real necessity and proportionality of such use.

Unlike international armed conflicts, which clearly categorize people as either “combatant” or “civilians”, IHL does not formally recognize the status of “combatant” in non-international conflicts. This is not due to any altruistic articulation by governments of the need to avoid using force against all persons during such conflicts, but rather because of their insistence that rebels must not in any shape or form benefit from any kind of international recognition. Since combatants generally benefit from prisoner-of-war status during international conflicts, thus protecting them from trial for having taken part in hostilities, such a result could not be envisaged in the case of rebel forces. On the other hand, it is accepted that there cannot be an unlimited use of force by governments during such conflicts.

Common Article 3 of the Geneva Conventions and Additional Protocol II have tried to use the notions of IHL to protect inoffensive persons whilst at the same time avoiding any hint of “combatant” status. The result is confusing and has caused controversy. One interpretation is that the reference to “armed forces” and “armed groups” means that force can automatically be used against them, especially since these same provisions stress the need to avoid using force against persons not taking “an active part in hostilities” or “civilians [not taking] a direct part in hostilities”. Indeed, the Commentary to Additional Protocol II supports this interpretation, since it states that force may be used against armed groups without reference to any further conditions. The second interpretation is that the use of force turns entirely on what the phrase “direct part in hostilities” means. This interpretation is based on the fact that the reference to “armed groups” in Article 1 of Additional Protocol II is only for the purpose of describing the situation that must exist for the Protocol to apply, and that the only reference to the use of force against persons is in Article 13, which protects from attack civilians not taking a direct part in hostilities.

There is the question to consider whether human rights law, which applies to such situations, could help resolve the issue of when force could be used and against whom. As known, human rights law requires a state’s forces to effect an arrest where possible and to plan operations in such a way as to maximize the possibility of being able to arrest persons. On the other hand, in cases where state bodies do not exercise sufficient control, human rights law does not impose such a requirement.

It is not easy to decide whether persons belonging to armed groups could be sometimes exempt from attack. However, even fighting members of such groups would be exempt from attack in situations where they presented no threat and could easily be arrested – the hypothetical case of a rebel in the process of doing his shopping in the supermarket was referred to. One basis for this conclusion was that he would be a person not taking “a direct part in hostilities” at that time – this would be based on the second interpretation of the relevant IHL provisions referred to above without the need for reference to human rights law. The second basis for this conclusion is an amalgam of the first interpretation of the IHL provisions and human rights – that is, persons belonging to armed groups can, in principle, be attacked but, under human rights law, must not be if they could be easily arrested.

One important concern is whether a prohibition from attacking rebels when they could be arrested would create an imbalance of responsibilities between government forces and rebel forces. IHL depends very much on the legal equality of opposing forces. However, in reality there is no such equality during non-international conflicts, since rebels remain criminals under domestic law and IHL respects this. Rebels
are, therefore, at a disadvantage in this respect. A perfect analogy with IHL applicable to international conflicts does not yet exist. On the other hand, it is normal that governments have more responsibilities under international law than their citizens, in this case the restrictions of human rights law.

Armed forces are targetable, without the need for imminence of danger, provided that rebel “armed forces” or “armed groups” are narrowly defined to include only those members who regularly do the actual fighting. This was suggested by the ICRC in the context of the meetings on the meaning of “direct participation” after several participants in earlier meetings pointed out the danger of allowing an attack on “armed groups” without further specification. Persons who are involved in the activities of armed groups, whether voluntarily or under pressure, vary and most of them do not use force. Further, it is not uncommon for governments to label an ethnic group as a whole as a “rebel group”, when only some of its members are using force. The second condition is that, even as regards the fighting rebel forces, they must not be attacked on sight if they can be easily arrested without undue risk for government forces. Such situations do occur in reality. These conditions respect both IHL and human rights: they would allow government forces to deal with the insurrection but at the same time require the government to take the necessary measures to plan for an arrest where possible rather than use lethal force. As for persons who are not fighting members of armed groups, then an attack can only be possible if it respects Article 9 of the UN Basic Principles, which, it must be remembered, spells out in which circumstances the use of force by state officials is possible to prevent potentially lethal violence by a person. If these conditions are not respected, then if lethal force is used before the suspected person executes a violent act a government executes a mere suspect, or if the government kills the person after such a violent act, it is in effect punishing the person with an instant death penalty.

It needs to be remembered that IHL relating to the use of lethal force against a person is different from the law relating to the attack of military objectives, that is, objects. The two should not be confused. The ICRC Commentary on the meaning of “direct participation in hostilities [by civilians]” in Article 51(3) of Additional Protocol I is as follows: “direct” participation means acts of war which by their nature or purpose are likely to cause actual harm to the personnel and equipment of the enemy armed forces”.

The evaluation of whether an object may be attacked does not require that the object uses, or is on the point of using, force, but only whether it effectively contributes to the military action of the enemy and attacking it gives one a direct military advantage. This is a less restrictive test than that governing the deliberate targeting of persons.

Summing up, once an armed conflict occurs, there still have to be concrete legal basis for a combatant to kill or to restrain from killings. Unless special restrictions and prohibitions are implemented legally, there would be no liability for violations of rules of warfare.

2.2. Allowed and forbidden means and methods of warfare

According to international law, the right of the parties to an armed conflict to choose methods or means of warfare is not unlimited. In the doctrine of international law there is a following widely recognized notion of “the means of warfare”: those are weapons and other means used by armed belligerents in order to damage and to defeat the enemy. There is also another important definition of “the means of warfare”: those are procedures and uses of warfare. Accordingly, means and methods of warfare can be divided into allowed (legal) and unauthorized (illegal). According to international law, all the means of warfare that are considered as inhumane ones are completely forbidden. This division is primarily doctrinal, as it was analyzed in detail in numerous studies of international humanitarian law. Regarding the content of the conventions in this sphere of law, there is no clear division between the means and methods of warfare, as they are in fact interchangeable on practice. Unauthorized means of warfare are all kinds of weapons, the use of which is contrary to the principles and norms of international law in force during the war.

As to the distinction between means and methods, the ICRC's commentary notes: “the term “means of combat” or “means of warfare” generally refers to the weapons being used, while the expression
“methods of combat” generally refers to the way in which such weapons are used”. This distinction evokes the difference often made in doctrine between “inherently” unlawful weapons (weapons unlawful “per se”, or “by their nature”) and the unlawful use of weapons. It should be borne in mind, therefore, that a weapon’s effects, with which IHL is ultimately concerned, will always result from a combination of its design and the manner in which it is used.

There are two basic ways to look at banning certain weapons or ways of using the weapons in war. The first, humanitarian view is that that war should be as “humane” as possible, limiting death only to intended targets, and delivered as quickly and painlessly as possible with, of course, the possibility of rescue or recovery. Obviously, weapons banned in inflict undue destruction on civilians. The second view is quite controvertial: putting rules on war war turns it into a legally regulated activity, instead of something to be avoided at all costs. This argument definitely makes sense, but wars and armed conflicts occur regardless the fact that they are forbidden. So it is better to at least set certain restrictions and rules on how to conduct war. This gives a legal basis to talk about violation of the rules of was when they occur. The same is true for the rules of use of means and methods of warfare: if there were no rules, it would have been really hard (or, rather, impossible) to talk about liability for violations in this sphere. Banning certain weapons and the ways of its use is an actual way to ensure legal protection of the right to life of persons in the context of armed conflicts.

In order to understand why a particular mean or method of warfare has become legally forbidden, it is necessary to look into the issue from historical perspective. The list of forbidden warfare formed simultaneously with the development of science and technology and improvement of new weapons. The Hague peace conferences became the cornerstone of the formation of forbidden means of warfare by the adoption of a number of conventions on the subject. In particular, Art. 22 of the Regulations on the Laws and Customs of War on Land of 1907 provided that “the warring parties do not enjoy the unlimited right in the choice of means damage to the enemy”. This principle was also the source of a number of specific prohibitions in military affairs. In particular, Art. 23d of the Hague Regulations contains provisions banning the use of “arms, projectiles or substances that can cause unnecessary suffering”. The expression “excessive suffering” means the consequences that are not justified by the military necessity.

With the development of nuclear weapons a very important historical stage began, due to the fact that people received a mean (a weapon) that can be a threat to the continued existence of all the mankind. Accordingly, there appeared a need to rethink the principles of development of international humanitarian law. Considering that, it was impossible to avoid the question of such means of warfare with indiscriminate effect, which makes it difficult (or, rather, impossible) to distinguish between combatants and civilians.

To ensure that inhumane means and methods of warfare are legally forbidden, the prohibition is implemented on national levels as well. Military manuals of most of the states nowadays contain norms that basically repeat the rules of international agreements that were mentioned above.

Summing up, it is necessary to note that international law limits the methods and means used to wage war. These restrictions apply to the type of weapons used, the way they are used and the general conduct of all those engaged in the armed conflict. The principle of distinction requires that parties to an armed conflict distinguish at all times between combatants and military objectives on the one hand, and civilian persons and objects on the other, and accordingly attack only legitimate targets. In general terms, international humanitarian law prohibits means and methods that cause superfluous injury or unnecessary suffering. As a result certain types of weapons are not allowed and the way other weapons are used is restricted.

Progress is also being made on controlling the proliferation of small arms that are so lethal in many poor countries. Parallel to bans and restrictions on unacceptable weapons, IHL also limits the use of “acceptable” conventional weapons. The law also regulates many other methods and means of conducting armed conflicts. There are rules on the misuse of flags of identification and the treatment of mercenaries; it is forbidden to order that there be no survivors in battle. Specific rules apply to demilitarized zones and non-defended areas.
2.3. Indiscriminate attacks

There is no particular exhaustive definition of “indiscriminate attacks” due to its possible vast meanings. Usually there are the following types of indiscriminate attacks:

1. An attack that is not targeted at military objectives. Damage to civilian property that is actually intended is known as wanton destruction, especially if it is wide-scale.

2. Use of weapons that are not able to be properly targeted.

3. Use of weapons that have uncontrollable effects.

4. An attack that treats an area with similar concentrations of military and civilian objectives as a single military objective.

5. An attack that may be expected to cause harm to civilians or civilian objectives in excess of the concrete and direct military advantage anticipated (Indiscriminate attack, Roy Gutman and Daoud Kuttab).

It is also necessary to mention that, apart from indiscriminate attacks there is a notion of “indiscriminate weapons”. Put simply, an indiscriminate weapon is one that is indiscriminate in nature. The ICRC declares the use of weapons “which are by nature indiscriminate” prohibited by customary international law. This prohibition is also contained within the Rome Statute of the International Criminal Court, and the military manuals of many states.

Defining a specific weapon as indiscriminate in nature is difficult and only very few weapons are agreed upon in international law as fitting into this category. Most of those which are agreed as being indiscriminate in nature - such as chemical and biological weapons - have specific treaties prohibiting their use, and their illegality is usually determined based on these treaties. The reason that so few are agreed to be inherently indiscriminate is partly because states are often reluctant to give up the ability to use certain weapons. It is also because the definition of what constitutes an indiscriminate weapon requires it to be shown that the weapon could never be used in a discriminate manner – a high threshold to pass, as it can be argued that most weapons can be used in a way that respects the principle of distinction and their effects limited, given the correct circumstances and manner of deployment. Nuclear weapons are the classic example often used as their effects are so destructive that it is hard to imagine how their effects could be limited as required by international humanitarian law. That said the scenario sometimes given to counter this argument is that if the nuclear weapon were targeted at a warship or submarine in the middle of the ocean, its effects could be limited solely to the destruction of the military target.

A large number of military manuals specify that indiscriminate attacks are prohibited. Numerous States have adopted legislation making it an offence to carry out such attacks. The prohibition is supported by official statements and reported on practice.

In conclusion, the international community considers the use of indiscriminate attacks on civilian populations as illegal under international law. The principal motive behind this prohibition is the violation of the basic principle of warfare – the principle of distinction between the military and civilian population, military and civilian objects. Under absolutely no circumstances are civilian population and civilian objects considered as a legit goal for any type of attack. Accordingly, by conducting indiscriminate attacks or by using weapons of indiscriminate nature there can possibly be no guarantees that civilian population or civilian objects will not be affected. World practice of international conflicts shows that massive civilian casualties and big damage to civilian objects and infrastructure is always caused by indiscriminate attacks. In such conditions it becomes literally impossible to talk about guaranteeing the compliance with individual rights and freedoms (including, first of all, the right to life). Thus, the prohibition of indiscriminate attacks is absolutely necessary and justified.
3. RESULTS AND DISCUSSION

Following on the background provided above, the hypothesis that is proposed in this paper is that the current approaches dealing with the international humanitarian law problems associated with right to life in an armed conflict are rather adequate. The problem is that on practice the rules are highly violated. Therefore, new approach is required which could contribute to preventing human right violations in the event of armed conflicts more effectively.

Statements defended in the paper:

1) Right to life is a fundamental human right of high importance, thus, big attention must be paid to its protection, especially in the context of armed conflicts.

2) Once an armed conflict occurs, there still have to be concrete legal basis for a combatant to kill or to restrain from killings. Thus, unless special restrictions and prohibitions are implemented legally, there would be no liability for violations of rules of warfare.

3) The obligation on states to make an effort to ensure right to life of its civilians in armed conflicts that the author regards as essential should logically be sanctioned by internationally harmonized rules of liability.

Obviously, in the context of armed conflicts and wars right to life can be violated very easily, so more attention should be paid in order to ensure its proper fulfillment. The main goal of international humanitarian law is to ensure fundamental human rights (and, first of all, the right to life) during armed conflicts. The objective of international humanitarian law is to limit the suffering caused by warfare and to alleviate its effects. Its rules are the result of a delicate balance between the exigencies of warfare ("military necessity") on the one hand and the laws of humanity on the other. Humanitarian law is a sensitive matter and it suffers no tampering. It must be respected in all circumstances, for the sake of the survival of human values and, quite often, for the sheer necessity of protecting life. Each and every one of us can do something to promote greater understanding of its main goals and fundamental principles, thereby paving the way for better respect for them. Better respect for humanitarian law by all States and all parties to armed conflicts will do much to help create a more humane world.

4. CONCLUSIONS

1. In the context of armed conflicts and wars additional attention must be paid to ensure non-violation of the right to life, although it is objectively inevitable that killings occur during wars.

2. Talking about the questions when the soldiers are actually allowed to commit killings, in international armed conflict combatants are entitled to directly participate in hostilities. In other words, they are permitted to commit lawful acts of war intended to achieve a military goal in the most effective way. The principle of distinction, however, requires that such acts of war be directed only against enemy combatants and military objectives, while preventing unnecessary and excessive damage to civilians. Therefore, implementation of the principle of distinction demands a clear definition of persons and objects that may be legally targeted. Insofar as persons are concerned, enemy combatants are members of the armed forces of a party to a conflict (except for medical personnel and chaplain). Persons who are not members of the armed forces are civilians and therefore shall not be the object of attack. There is one exception, however: civilians directly participating in hostilities - either individually or as part of a group - become legitimate targets of attack, though only for the duration of their direct participation in hostilities. As far as objects are concerned, military objectives are defined through a two-pronged test: the object to be attacked must by its nature, location, purpose or use contribute effectively to the military action of the enemy and its partial or total destruction, capture or neutralization, must offer - in the circumstances ruling at the time - a definite military advantage. All objects which do not fall under the definition of a
military objective are civilian objects and shall not be attacked.

3. International law limits the methods and means used to wage war. These restrictions apply to the type of weapons used, the way they are used and the general conduct of all those engaged in the armed conflict. International humanitarian law prohibits means and methods that cause superfluous injury or unnecessary suffering. As a result certain types of weapons are not allowed and the way other weapons are used is restricted. Progress is also being made on controlling the proliferation of small arms that are so lethal in many poorer countries. Parallel to bans and restrictions on unacceptable weapons, IHL also limits the use of “acceptable” conventional weapons.

4. The international community considers the use of indiscriminate attacks on civilian populations as illegal under international law. The principal motive behind this prohibition is the violation of the basic principle of warfare – the principle of distinction between the military and civilian population, military and civilian objects. Under absolutely no circumstances are civilian population and civilian objects considered as a legit goal for any type of attack. Accordingly, by conducting indiscriminate attacks or by using weapons of indiscriminate nature there can possibly be no guarantees that civilian population or civilian objects will not be affected. World practice of international conflicts shows that massive civilian casualties and big damage to civilian objects and infrastructure is always caused by indiscriminate attacks. In such conditions it becomes literally impossible to talk about guaranteeing the compliance with individual rights and freedoms (including, first of all, the right to life). Thus, the prohibition of indiscriminate attacks is absolutely necessary and justified.

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“Into Rapidification”: An Analysis of the Philippine Mining Industry and its Implications in the Behavior the Stakeholders

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ABSTRACT

“Rapidification is the continued acceleration of changes and intensified pace of life affecting humanity and the planet” (LS p.18). Along with these rapid complex systems, “man has extended his mastery over nearly the whole of nature and continues to do so, with the help of science and technology (GS 33, 1996).”

Mining is one aspect of human development. With the positive effects of mining “the resurgence of world metal prices, particularly gold, copper and nickel, has resulted in the revitalization of the Philippine mining industry in the year 2000 onwards (David, 2007). However, with the positive effects of mining, it has its drawbacks. Developments in the mining industry are the cause of about 10.3 percent of all displacements in the world, (Terminski, 2012). With displacement comes destruction of the environment and culture; exhaustion of economically valuable resources and impact on self-identity.

The study is a descriptive research using textual analysis. The challenges and behaviors manifested are analyzed critically using Leopold’s theory (1949) on conservation. To find the repercussions of these challenges and behavior, the Laudato Si encyclical of Pope Francis in the context of caring and conserving is used as a systematic structure.

The result is intended to generate discourses towards the development of research and intervention towards a better world.

1. INTRODUCTION

The earth as man’s habitat is also home to other forms of life. Each one is connected with everyone. The Philippines, which consists of 7,107 islands, has fragile tropical ecosystems. It has an outstanding biodiversity hotspot making it one of the 17 countries in the world that are the richest in biodiversity. There are more than 52,177 species in this country which have been identified wherein half of them are found nowhere else in the world (Doyle, 2007).

When change happen to any part of it, it also affects the other. In the passing of time, human beings discovered means towards development. Research shows that development is manifested in the way humans utilize what exists in his surroundings. Human development continues to happen aided by technology that seemingly help make a better world. But with development comes the utilization of raw materials. Along with this comes the necessity for human beings to decide to destroy, remove and set aside rules of the natural law that paved its way towards development. The destruction of natural resources became a means to build new and modern facilities. Human behavior has adjusted to the demand of change. However, with the glaring negative effects on the environment, individual and community participation became a necessity.
The Philippines has an estimated $840 billion worth of untapped mineral resources, according to the Mines and Geosciences Bureau\(^7\). MGB is responsible for giving permits to mining companies to do exploration of mining areas and to commence operation. The enactment of Republic Act No. (RA) 7942, which is also known as the Philippine Mining Act, aimed to spur the development of the Philippine mining industry. This gave way to the rise of the mining industry in the Philippines, resulting in a sharp increase in foreign investments both in large and small scale mining industry (Bacamonte, 2015).

Mineral activities and its operations necessarily carry with them various environmental, economic, social, and cultural impacts, which due to the nature of mining may be negative or positive depending upon the stakeholders’ interests.

This paper offers insights on the challenges and behaviors of the community as stakeholder in an identified mining company. Such data is crucial in understanding the Land Ethic of Leopold’s and how these variables will paved the way to better understand the relevant issues in mining. This research is guided by the following questions:

1) What are the challenges confronted by the stakeholders of the mining industry?

2) What are the behaviors exhibited by the stakeholders in the operation of the mining industry?

3) How do these challenges and behaviors reveal the systematic structure of caring and conserving as expressed in Laudato Si?

### 1.1. Mining in the Philippines

Mining is a vital industry for techno-industrial societies. It becomes necessary for the construction of facilities and production of materials that caters to the daily needs of human beings. Mining is indeed perceived as a necessity for human development. Throughout the centuries, people from different corners of the world mined for various minerals.

The mining history of the Philippines started from the Maharlikan time to Spanish colonial period and the American governance in the year 1898. During the 10th century, the Laguna copper plate dated 900 A.D. attest to the fact that the Maharlikans prior to the Muslim (1478) conquest in Southeast Asia, Spanish (1521) colonization, and American (1898) governance, the Filipino were already trading using gold as a means of business and trading transactions (Hudtohan, 2015).

In a number of regions in the archipelago, indigenous communities mined for minerals like gold, copper and many others. They used them for body ornaments. In time, they learned to barter with merchants from other countries. The Philippines is actually the fifth most mineral-rich country in the world for copper, nickel, gold and chromite. This has been a home to the largest copper-gold deposit in the world. The first commercial mine in the Philippines was in Benguet, located in central Luzon, established by the Benguet Mining Corporation. The Spanish colonizers took advantage of whatever minerals they could get. Gold

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\(^7\) The Mines and Geosciences Bureau (MGB) is the primary government agency under the Department of Environment and Natural Resources (DENR), pursuant to Executive Order No. 192 on June 1987. The MGB is responsible for the conservation, management, development and proper use of the country’s mineral resources including those in reservations and lands of public domains. It absorbed the functions of the Bureau of Mines and Geosciences with the exception of line functions that were transferred mainly to the DENR regional offices. It also absorbed the functions of the abolished Mineral Resources Development Board (MRDB), and the Gold Mining Industry Assistance Board (GMIAB).
was what attracted the Spaniards that prompted them to enact the law called Inspeccion de Minas that inspects the existence of minerals in the country. It was the Americans, however, who made strategic means to abuse and exploit the minerals here. They did a geological survey, which validated the Philippines as a mineral-rich country, and issued Act 468, a law that basically gave the government the right to reserve mineral lands for its own purposes. They declared some areas as “reserved areas” for future mining, hence Benguet gold mining was turned into commercial mining operation. In 1914, Surigao and other parts of the Caraga Region in the southern part of the country were declared as an “iron reserved”.

The idea was in fact to regulate all potential operations and to ensure their right to future mining and formed a Mining Bureau. Until 1921, there was no presence of large scale mining but a good number is making money from mining gold. Gold was the dominant and famous mineral in the market between 1933 and 1941. During the Japanese occupation, many Filipinos in different regions were forced into mining metals to be used in the productions of war implements.

This led to further commercialization, exploitation and degeneration of the Philippines. Large scale copper mining reached its peak in the 1960s and 1970s but has declined in the 1980s in favour of gold. With the help of the World Trade Organization, the International Monetary Fund and the World Bank, the neo-colonized Philippines was once again forced to adjust its economic policies and adhere to neo-liberal policies. In 1994, Gloria Macapagal-Arroyo lobbied for a Mining Bill which later became the Republic Act 7942 also known as the Philippine Mining Act of 1995.

This law basically gives authority over land, resources and life to corporations. This led to the Philippine mining industry to get back on track in 1996 and allowed offshore companies to operate fully on reserved areas. But the operations led to several disasters not only to the workers but also to the environment itself like the death of Boac river in the north. At present, there are about more than 20 large-scale mining that are operating and more than 2,000 non-metallic small-scale mining that exist in the country.

Under the leadership of the then Secretary of the Department of Environment and Natural Resources, Gina Lopez, large-scale mining operations were shut down or at least were issued notices of closure for non-compliance to the responsible mining act. This created problems with the Mining Corporations and their investors. It took the attention of media and environment advocates but her policies and her concern for the long-term effect of irresponsible mining were set aside and resulted to the rejection of her appointment as Secretary by the Commission on Appointments. The contention of those in mining corporations is the employment that they generate to and for the people working in their companies and also the concern of their investors and the amount of money it contributes to the Philippine economy.

2. METHODS

The researchers employed the descriptive method of research using textual analysis. As defined, “descriptive research is “aimed at casting light on current issues or problems through a process of data collection that enables them to describe the situation more completely than was possible without employing this method” Fox & Bayat (2007).

The textual analysis was performed using the “transcript of communications or what you call verbatim recordings” (Frey, Botan & Kreps, 1999) from an interview conducted. Further, Frey, Botan & Kreps (1999), states that “textual analysis is the method of communication researches use to describe and interpret the characteristics of a recorded or a visual message”.

There is a need to understand the kinds of transactions or bargains that take place between the mining industry and its stakeholders (Freeman, 1984). These transactions or bargains are manifested in the
various challenges and behaviors experienced by the stakeholders at the onset, during and after the operation of the mining industry.

To acquire the data on the behavior of the stakeholders, representatives from the community were interviewed on the area of their reception of the mining operation in their place. Data gathered from the interview were transcribed and significant information were identified. The expressed phrases or words uttered by the stakeholders were likewise taken into consideration before themes were extracted.

The challenges confronted and behaviors exhibited by the stakeholders were analyzed using Leopold’s theory (1949) called as “land ethic”. Land ethic is a philosophy that urges love and reverence for nature (Leopold, 1949). The intent is to understand how humans, specifically the stakeholders relate to nature. These themes were further analyzed to find out its manifestation in the systematic structure of caring and conserving as expressed in Laudato Si88.

Study Area

While the paper hopes to shed light on the challenges of mining in the Philippines and its impact to the stakeholders’ behavior, the researchers opted to limit its scope with a specific community of stakeholders known as the “Dumagats” on a mining operations being done in their place. The researchers gathered additional data in an interview with the community who were residing in the Barangay where a mining company was operated.

Dona Remedios Trinidad, Bulacan

Dona Remedios Trinidad is a first class municipality in the province of Bulacan. It is located in Central Luzon, Region III which was established in 1977 under the Presidential Decree 1196 by then President Ferdinand E. Marcos. It was named after Dona Remedios Trinidad, his mother-in-law who hailed from Baliuag, Bulacan. To date, Dona Remedios Trinidad is considered as Bulacan’s “last frontier because of its natural environment and as it is the least travelled town in the province. It is the largest municipality for it spans almost one third of the land area of the entire province. It lies on the Southern edge of the Sierra Madre Mountain Range and partially embraces three major conservation areas namely: Angat Watershed Forest Reserve, Biak-na-Bato National Park and Dona Remedios Trinidad General Tinio Watershed Forest Reserve. Its mountainous terrain is home to farmers living interdependently with nature and other inhabitants. It is also a place where minerals are rich, hence the interests of those in the mining industries.

3. RESULTS AND DISCUSSION

The result of this study outlined below shows the challenges experienced by the stakeholders and the behaviors manifested from them as they addressed these challenges:

3.1. Conqueror Behavior

At the onset of the mining plan of operation, it cannot be denied that there are lands possessed, occupied, or utilized by indigenous cultural communities by themselves or through their ancestors in accordance with their customs and traditions since time immemorial and as may be defined and delineated by law

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88 *Laudato si* (Medieval Central Italian for "Praise be to you") is the second encyclical of Pope Francis. The encyclical has the subtitle "On Care For Our Common Home". In it, the Pope critiques consumerism and irresponsible development, laments environmental degradation and global warming, and calls all people of the world to take "swift and unified global action".
(The Indigenous Peoples Rights Act: Rep. Act No. 7942, Section 3a, Article XII, Sec. 5 1987 Constitution). “The prior consent of the indigenous cultural community” is needed before it can be “opened for mining operations” (Section 16). The Philippine Mining Act (Cagampang-De Castro, n.d.) provides for the acquisition of mineral rights on ancestral land and contains regulatory provisions such as: (a) opening of ancestral lands for mining operations, and (b) royalty payments for indigenous cultural communities.

In the conduct of the interview, there was a lack of free prior informed consent from Dumagat tribal communities as this was also evident in the article written by Balabo, (2011). Participants confirmed that there was a meeting called by the local government but the meeting was in fact likened to a formality because the representatives already took the initiative to accept the offer in behalf of the community/stakeholders. According to the community leader, the meeting was a gathering to inform the community of the benefits that they could gain if the mining operation will commence. Despite of the not well represented Dumagat tribes in the community assembly, the decision to set-up and operate pushed through. The elements of “free and prior informed consent” include public notice, community assembly, informed consent and freedom from fraud, external influence or manipulation.

“It is important for the Dumagat to be aware of the possibility of working in the mining company. Based on our experience, the Dumagats were protected by NCIP and were not displaced from the area. DRT was declared “Ancestral Domain” before the mining operation started, thus they already have an access to the area.”

The experience of the Dumagat is not new. Thousands of mining industries all over the world starts their operation without any proper consultation or any community participation from the indigenous people or the local communities. In the study conducted by (Walsch et al., 2017), they said “Consultation is the predominant method of community engagement in infrastructure development”. Through a meaningful consultation, it will ensure just social development practice, and help accumulate information on how the community desires to be involved in infrastructural projects. However, this rarely happens in the community. Stakeholders have no choice but to latter agree with the proposal of the mining company even if they do not fully understand its implications.

Leopold believes that there is a need to change the way people viewed their role in the community. In his Land Ethic Theory, he said that the practice of Land Ethic will “change the role of Homo sapiens from conqueror of the land-community to plain member and citizen of it. It implies respect for his fellow-members, and also respect for the community as such” Thus, human should see themselves as plain members of the community and not conquerors. (Leopold, 1949), but in this case, miners were considered the conquerors.

Among age old symbols of having power are money, political offices and land. When you have any of

89 NCIP – National Commission on Indigenous Peoples
these three you feel as if you can do anything and everything you want. You become a conqueror. This self-entitlement puts the society at risk. According to Pope Francis, such is not our goal. “Our goal is not to amass information or to satisfy curiosity, but rather to become painfully aware, to dare to turn what is happening to the world into our own personal suffering and thus to discover what each of us can do about it.” (LS 19). Therefore, there is a need for mining industry to assume a more open and constructive approach in their interaction with local groups (de la Flor, n.d.).

3.2. Economic Behavior

“In the event of an agreement with the Indigenous Cultural Community, the royalty payment upon utilization of the minerals shall be agreed upon by the parties. The said royalty shall form part of a trust fund for the socioeconomic well-being of the indigenous cultural community” (Cagampang-De Castro, n.d.).

As stated in the provision, the royalty payment was given to the Dumagat tribe in a form of the following:

a. opportunity to work in the mining company (“nabigyan din nga pagkakataon na makapagtrabaho sa kompanya”); The socioeconomic well-being of the community

b. development of roads for an easier access to the other parts of the community and municipality (nagawa ang gumanda ang mga kalsada ang umaayon sa pamayanan at kabayanan. Naging madali para sa mga tao ang pagpunta sa bayan para sa iba pa nilag pangangailangan);

c. scholarship grants were given to the children of the mining company workers (“nagbigay din ang kompanya ng scholarship grants sa mga anak ng mga nagatrabaho sa kanila maging sa ibang kabataan na gusto ring ipagpatuloy ang kanilang pag-aaral sa kolehiyo. Sa katunayan, nahit dito sa Barangay naming, meron sigurong aabutin ang nabigyan din ng scholarship grants. Halos 25% ng mga bata ay nakakapag-aral”);

d. classrooms and community health center were built (“nagpatayo din ang kompanya ng mga silid aralan para sa mga bata sa elementarya at health center para sa pamayanan”);

e. acquisition of these new skills in the use of technology (“pagdating sa pansariling kakayahan, ang dating mga mamamuhikid o ‘construction worker’ ay nabigyan din ng pagkakataon na madagyagan ang kanilang kaalaman sa teknolohiya. Ang iba ay natutong gumamit nga mga makabagong kagamitan na wala sa kanilang dating gawaing”).

In the above account of the interviewee, internal and external economic benefits of the extraction of mineral resources are evident. Internally, mining provides jobs or employment (as stated by the community) not only for the miners but for all the people who will take part in the industry. It is a form of revenue generation for many people. Mining provides the good life to those employed in the industry with high-paying salaries and a package of nonfinancial benefits, including housing, health, and education for their children. Externally, a substantial foreign exchange is available to such countries (Mayuga, 2017).

The community stakeholders’ behavior, can be compared “just like non-indigenous peoples, where they want tomorrow to be better than today. The word “better” is being defined by them in a culturally appropriate manner. To them, results or outcomes are linked to on-going struggles for support, services, sovereignty or self-determination (Downing, et. all, 2002).
Downing, et. al., (2002) stressed in the article that:

“non-indigenous stakeholders (NIS) “tend to approach the encounter as primarily an economic transaction in which the loss of land and resources is compensated with cash payments or some potential employment, with possibly short term material benefits. In contrast, the indigenous struggle is not simply to own real estate but also to protect their culturally defined landscape. Land is not a marketable commodity. The loss of land may mean, to them, that their entire culture is threatened, including their ways of being and doing, their shared expectations, and shared understandings of the nature of their environments and their pasts, presents, and futures”.

In this study, it can be presumed that the Dumagats’ may feel threatened in by the mining operation in the community. But, what manifested more are the advantages the community who are optimistic anticipation from the company. The aims of fast solutions to their problems are evident in their answers:

What is more important is the compensation and benefits we get from the company (“Ang nakikita lang ng mga tao sa ngayon ay ang nakukuha at natatanggap namin sa ngayon)

The compensation they receive at present can suffice their present basic needs (“...kasi natutugunan ang kanilang pangkasalukuyang pangangailangan”).

This presupposition leads to an “economic behavior”, where according to Leopold’s in his Land Ethic theory as the “land-relation”. It is where people would look at the relationship (land and community) with economic self-interest (Leopold, 1949). Having this kind of behavior develops an “attitude of consumers, masters, and exploiters” (LS 11). Pope Francis in his encyclical letter challenges everyone that if the person feels being united with nature, consequently the person can also honor and care for the interconnected of all things. Furthermore, the Pope hopes that we can have an attitude to one that exudes sobriety, care, and joy (LS 11).

3.3. Environmental Challenges

There are different kinds of mining. One of them is the open-pit mining. Open-pit mining causes massive destruction of forest ecosystems—as forests are shaved, mountains flattened, and the digging and hauling continue, until huge bowl-like holes are formed. In situations like this, massive numbers of trees were cut resulting in increased flooding, devastating landslides, siltation and the destruction of biodiversity areas. (Mayuga, 2017)

All these were felt and experienced by the community who were respondents of this research. According to them, the water that flows from the river became dirty. This also affected the nearby communities where the water passes. (“naging madumi ang tubig na dumadaloy sa aming ilog na ang kabuuan ay nasasakupan ng iba pang mga pamayanan at iba pang bayan”).

They used to bathed and washed clothes in the river but because of the improper way of handling the mining industry they can no longer do those things. (Kung dati ay malayang nakapalitago at nakapaglababa ang mga tao sa ilog, ang hindi tamang paraan ng pamamahala sa minahan ay nagdulot ng problema sa mga tao.) They even said that the fish and other living organisms that exists in the river
The effects of the siltation in the river stirred complaints from the community (Jasareno, n.d., as cited by Simeon, 2016). Siltation is being defined as a process by which water becomes dirty as a result of fine mineral particles in the water (www.your dictionary.com, 2017).

The United States Environmental Protection Agency said that water contamination from mining poses one of the top three ecological security threats in the world. This was affirmed in the study conducted by Butler (2012). He said that, “while deforestation and chemical pollution from mining can impact the rainforest environment, downstream aquatic habitats fare worse. Increased sediment loads and reduced water flows can seriously affect local fish populations.”

Mining is a way for a country to be industrialized. However, there are environmental challenges brought about by mining. According to Leopold (1949), “industrialization is now bringing on a worldwide conflict between economics and conservation (ecology). That land is a community as a basic concept of ecology, but that land is to be loved and respected. It is an extension of ethics. (Leopold 1949: vii–ix)”. He even said that, “a thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise. (Leopold 1949: 224–5). Further, Leopold (1949) described that there is no ethic dealing yet with man’s relation to land, animals and plants which grow upon it. The ethical consideration needs to be an ecological whole (“soils, waters, plants, and animals”) not be with individual plants or animals, but with the healthy functioning of completely biotic communities.

In Laudato Si, Pope Francis calls for people to recognize the value of the environment and everything in it. He said, “it is not enough, however, to think of different species merely as potential “resources” to be exploited, while overlooking the fact that they have value in themselves (LS33)”.

3.4. Cultural Challenges

The values of the indigenous communities and their tradition perspective about life and everything around them tend to change and slowly slipped away in their being when socio-economic realities force them to look for alternative sources of livelihood brought about by the mining industry within their community. (“Binodngan Ancestral Domains,” 2011, cited in Wetzlmaier, 2012). In the case of the Dumagat, their livelihood was affected given the situation as reflected in the interview:

“Because of the rocky mining location, planting of any sort is not feasible”. The mining industry gives hope to the community and provides them livelihood”. (“Dahil mabato ang lokasyon ng minahan, at hindi pwedeng taniman ng palay at iba pang pananim, ang minahan ang nagbigay pag-asa sa mga tao doon upang magkaroon ng hanapbuhay”).

The new acquired livelihood in mining affects not only the strong cultural ties of indigenous communities in one way or the other “loss their culture and identity” (Brawner Baguilat, 2011 cited in Wetzlmaier, M. 2012). The Dumagats are no longer hunting, planting, raising coconuts and “mag-uuling” (making charcoal). They are now employees of the mining industry.

The Theory of Leopold (1949) as cited by Breakey & Breakey, (2014) on conservation, also exemplified in the behavior of how the community looked at foreigners (mining investors) as collaborators, thus they are treated with respect like their kin. Having that perspective, the community considered them as part of the ecosystem. Breakey & Breakey, (2014) mentioned that this perspective welds them emotionally to others, making the connection a real part of their lives and extended community, which can result to
altering their goals and personal identities. This attitude drives them to change their behaviour and their identity.

The attitude of openness of the community can denote a negative effect, and perceived as an approval to operate the mining industry in their community or worst manipulate them.

Pope Francis reminds us that, “It is essential to show special care for indigenous communities and their cultural traditions. They are not merely one minority among others, but should be the principal dialogue partners, especially when large projects affecting their land are proposed. For them, land is not a commodity but rather a gift from God and from their ancestors who rest there, a sacred space with which they need to interact if they are to maintain their identity and values. When they remain on their land, they themselves care for it best. Nevertheless, in various parts of the world, pressure is being put on them to abandon their homelands to make room for agricultural or mining projects which are undertaken without regard for the degradation of nature and culture” (LS146).

4. CONCLUSION

The challenges and behaviors that emerged from the study are environmental and cultural challenges and conqueror and economic behaviors. Environmental challenges pertain to the destruction of biodiversity. On the other hand, cultural challenges refer to the alteration and eventual loss of culture and identity. In terms of the behaviors, the conqueror is described as the one who controls the land. When the community looks at the land only in terms of economic benefit, this directs to an economic behavior.

Despite of the threat of environmental destructions due to mining industry that is posed upon the community, they are still willing to accept the consequences. Evidently, economic reason is one of the major factors of making them embrace it to the point of even losing their own culture and identity. For them compromising even their own culture is not considered a problem, they look at it with a positivism of opportunities to work at the same time a new way of life especially when it comes to new skills acquired. They are not bothered with the dangers and threat these environmental changes may bring.

The theory of Leopold (1949) and the systematic structure of Pope Francis on Laudato si’ reminds the people about the challenges and behaviors mentioned above for they are signs of rapidification. “Rapidification is the continued acceleration of changes and intensified pace of life affecting humanity and the planet” (LS 18). Leopolds’ theory stressed that there is a need to “preserve the integrity, stability, and beauty of the biotic community”. Pope Francis also affirmed this by calling all people of the world to take "swift and unified global action" on “care of our human home.

This could be done by uniting the government agencies, church leaders, educational institution, respective communities and even the basic unit of society, which is the family to work together in strengthening educational and informational campaign the positive and negative effects of mining industry.

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5. Universitas Indonesia

6. REFERENCES


Predictors of Pro-environmental Behaviour among Archaeological Tourists: A Conceptual Model

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ABSTRACT

Archaeotourism focuses on visiting and experiencing ancient sites and historical places. Commercialization of this niche tourism market will definitely bring many negative impacts if there are no proactive actions taken to conserve and protect these sites because the sites depended upon a fragile and non-renewable resource. Although archaeological tourism development is able to boost the local economy and improve the living standard of the local community, it will easily destruct the monuments when there is mass visitation due to the lack of proper protection. Therefore, understanding tourists’ pro-environmental behavior is crucial. The present study aims to investigate tourists’ interpretation, values orientation and awareness on pro-environmental behaviour when visiting archaeological sites. In addition, this study also will look at the mediating factor of attitudes between interpretation, values orientation, awareness, and pro-environmental behaviour. 400 questionnaires will be distributed to the tourists at Lenggong Valley World Heritage Site and Bujang Valley. The collected data will then be analysed by using AMOS 22. Promoting sustainability is essential to ensure that future generations inherit a resource base that is sufficient to support their needs and want, particularly in the setting like archaeological site where all monuments are irreplaceable. The expected findings hope to provide and help the government in designing the preservation plan to protect the archaeological sites.

1. INTRODUCTION

Gao (2016) defines archaeological tourism as people’s activity of consuming the past through visiting places of archaeological significance. Archaeological tourism is not particularly attractive in developing countries as a device for promoting generalized economic development but uncovering evidence of past societies by providing values resources that modern community use in defining their identities through the exploration of their heritage (Pacifico and Vogel, 2012); for education, and for promoting national identity (Diaz-Andreu, 2013). Visitation to archaeological sites began in ancient Egypt and it was intensified in the 15th century with organized pilgrimages to the Holy Land with religious, cultural, and leisure components. Today, the number of tourists who visited archaeological sites have increased tremendously over the years i.e. the Pyramids of Giza receive in excess of 1.7 million overseas visitors each year and a further 800,000 domestic visitors.

Archaeological tourism is often considered to be a variation of heritage tourism, and is associated with the term “inheritance,” suggesting the transfer of cultural traditions from one generation to another (Walker, 2005). Archaeological sites attract tourists, who are interested in archaeology and history, tourists who want to view the archaeological artefacts firsthand, and those who have enough curiosity about the ruins that they will make time to visit an archaeological park (Walker, 2005). Archaeological tourism is beyond artefacts, it is about the context-historical, temporal, and geographical context within which they occur; how they are positioned in the ground relative to other artefacts and to the various layers of soil; and how the archaeological sites relate to other sites and to recorded history (Historic Preservation Planning Bulletin, 1996). These are some of the factors that contribute towards the archaeological sites’ unique identity. However, there are few issues that are always faced by archaeological tourism sites such as the lack of participation in tourism planning, stolen, culture exploitation, destruction of sites by uncovering them and effects of the environment such as soil degradation and activities peoples living in destinations.
In addition, Chia (2016) draw-up some threats that bring negative impact to Malaysia’s archaeological heritage by human such as the awareness and priority in preserving and protecting the archaeologically sites; the construction of highways, roads, dams; agricultural activities; and the changes in religious values or beliefs.

Orbasli and Woodward (2009) outline a few commonly noted and measured impacts of tourists on historic buildings and places of historic interest:

a. Historic fabric becomes worn with heavy foot traffic.
b. Changes in internal conditions, humidity and even the transfer of microorganisms have impacts on material conservation.
c. Wear and tear where large numbers of visitors magnify the levels of disturbance to the building fabric above levels that would have been experienced prior to the development of tourism.
d. The congestion and pollution associated with tourist buses and cars, especially in historic town centres.
e. Vandalism, graffiti, and even theft of the historic fabric can be common outcomes of visitor activity.
f. A change in circumstances such as inscription onto the World Heritage list.
g. Loss of character may be experienced as high numbers impacts on the appreciation of the place.
h. The desire to locate tourism services close to major attractions can directly impact on the cultural heritage attraction itself and especially its setting.

Although this niche market offers lucrative economic development, some may see it as hindrance. This is because effort in promoting archaeological tourism has been in the dilemma between site preservation and economic profitability, unregulated tourism development, the influence of UNESCO World Heritage designation, and authorities’ sensitivity towards ethic issues in archaeological tourism (Gao, 2016). Overly visited archaeological sites have brought apprehension to conservators of archaeological sites because the visitation might bring in significant numbers of negative impacts to the archaeological sites. This concern is couched because archaeological sites are often considered as fragile, looking at the easily destroyed artefacts, distinctive and authentic features which differentiate them from one and the other (Buonincontri, Marasco and Ramkissoon, 2017; Srivasta, 2015). In addition, Wurz and Van der Merwe (2005) raise the fear on high sensitivity of archaeological sites and its artefacts to human utilization when these fragile and tangible cultural heritage assets having close contact with the tourists.

In Malaysia, a few archaeological sites namely Niah Cave, Lenggong Valley, Bujang Valley, Bukit Tengkorak were reported receiving not less than 2000 tourists per month. Even when these sites have yet to receive visitation from international tourists, they are currently facing some challenges in the conservation management. For instance, several sites in Lenggong Valley have been vandalized with graffiti done by irresponsible visitors. In addition, Bujang Valley is not exactly free from destruction. It is reported an eight-century-old Hindu temple known as Candi No 11 in Sg. Batu was secretly demolished by a housing developer. Therefore, before these archaeological sites are being over crowded as world heritage site under marketing communication effect, the management team of the site must have a proper plan in conserving and preserving these sites in order to receive mass visitation in the near future.

Previous studies have conducted pro-environmental behaviors among national park visitors (Halpenny, 2010); marine park visitors (Tonge, Ryan, Moore, Beckley, 2015); mountain tourists (Zhang, Zhang, Zhang, Cheng, 2014). Nevertheless, limited studies (Mustafa, 2015) were paying attention among archaeological tourists’ pro-environmental behaviors in Asia and Southeast Asia context. Therefore, the current study proposes to investigate the interpretation, value orientation, awareness of consequences, attitude that influencing the pro-environmental behavior among the tourists.
2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 Mehrabian and Russell’s Stimulus-Organism-Response (S-O-R) paradigm

The current study plans to employ Mehrabian and Russell’s (1974) Stimulus-Organism-Response (S-O-R) paradigm as a theoretical base to support the integrative model proposed by the authors. The current paradigm is adopted to understand the motivations of tourists in term of their cognitive and emotional states on their behavioral response. The three elements of the model comprise of a) stimulus, where the influence that arouses the individual; b) organism, where cognitive and affective intercessor state of tourists and its manifest the processes that intercede between the stimuli and response; c) response, where the outcome is performing or avoid by the stimuli and organism. Literature has validated the applicability of the S-O-R paradigm in predicting consumers’ responses in buying behavior (Chang, Eckman, and Yan, 2011); tourist motivation (Rajaguru, 2014); brand loyalty among online community (Islam and Rahman, 2017). In the current study, interpretation, value orientation, and awareness are considered as the stimuli (S) in which they are expected to affect the tourists’ attitude. Tourists’ attitude is considered as organism (O) and pro-environmental behavior towards archaeological sites is measured as the response in the proposed framework.

Table 1: Summary of S-O-R paradigm in tourism industry

<table>
<thead>
<tr>
<th>Tourism Type</th>
<th>Stimulus</th>
<th>Organism</th>
<th>Response</th>
<th>Citations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event Tourism</td>
<td>Festival atmospheric</td>
<td>Emotion, satisfaction, psychological commitment</td>
<td>Loyalty</td>
<td>Lee (2014)</td>
</tr>
<tr>
<td>Culinary Tourism</td>
<td>Festivalscape/Environment</td>
<td>Emotion (satisfaction)</td>
<td>Behavioral intentions</td>
<td>Mason &amp; Paggiaro (2012)</td>
</tr>
<tr>
<td>Ecotourism</td>
<td>Facility aesthetic, layout and placement, Point-of-purchase and human</td>
<td>Utilitarian value and hedonic value</td>
<td>Re-visitation behaviours</td>
<td>Chang, Shu, &amp; King (2014)</td>
</tr>
<tr>
<td>Leisure Tourism</td>
<td>Ambience factor</td>
<td>Pleasure, Arousal, Dominance, Disconfirmation</td>
<td>Satisfaction</td>
<td>Im &amp; Ha (2011)</td>
</tr>
<tr>
<td>Wellness Tourism</td>
<td>Atmospheric cue and involvement</td>
<td>Relaxation, pleasure, satisfaction</td>
<td>Word-of-mouth</td>
<td>Loureiro, Almeida, Rita (2013)</td>
</tr>
</tbody>
</table>

2.2 Stimuli: Interpretation

Tilden (1977) first coined interpretation as an educational activity which aims to reveal meanings and relationships through the use of original objects, by firsthand experience, and by illustrative media (i.e. documentaries, short films etc.), rather than simply to communicate factual information. In the recent definition by Timothy and Boyd’s (2003), interpretation is defined as the modes of visitor communication such as signs, exhibit, brochures, talk and costumed performances that are specifically designed to help visitors understand, appreciate and engage with heritage sites. The purpose of interpretation is to transfer the message in order to achieve knowledge gain and/or attitude change (Lee and Balchin, 1995); and in archaeological sites context, the interpretation of illustrative media serve to explain and promote the sites’ significance, the degree of access and how this is likely to impact on host communities and ways of ensuring that heritage attractions are open to all, both now and in the future (Ballantyne, Hughes, Ding and Liu, 2014) and in the meantime protecting the monument against destruction (Binoy, 2011).

Moscardo, Ballantyne and Hughes (2007) illuminate an effective interpretation should:
i. make a personal connection with, or be relevant to, the intended audience;
ii. provide or encourage novel and varied experiences;
iii. be organized with clear, easy to follow structure;
iv. be based on a theme;
v. engage visitors in the learning experience and encourage them to take control of their own learning;
vi. demonstrate understanding of, and respect for, the audience.

Generally, the principle of good interpretation is essential in gaining yawning understanding of tourists (Xu, Cui, Ballantyne and Packer, 2013). Tilden (1997) argues that a good interpretation should be made of information being displayed or described to something within the personality or experience of the visitor. Past studies show that a well-designed interpretation has the potential to enhance pro-environmental behaviors (Hvenegaard, 2017). The main purpose of interpretation in archaeological sites is to instill in the public a sense of stewardship toward the archaeological record and to make clear the connection between the people and heritage in order to enable the tourists to support the conservation by understanding the ancient monuments and artifacts (Walker, 2002).

The concept of the interpretation has been tested of its influence in different settings range from tourists’ experience (Poria, Biran, Reichel, 2009), tourists’ satisfaction (Huang, Weiler, and Assaker, 2015), tourists’ knowledge, (Hvenehaard, 2017), tourists’ motivation (Xu, Cui, Ballantyne and Packer, 2013), tourists’ attitude (Kim, Airey, and Szivas, 2011). Therefore, the researchers have reached the hypotheses that:

H1: Interpretation is significantly influencing tourists’ attitude.

2.2 Stimuli: Value orientation

Values are conceptualized as the guiding principles central in people’s life (Hedlund, 2011). Values are widely used in the field of environment, psychology and behavior to predict pro-environmental behavior (Zhang, Zhang, Zhang, & Cheng, 2014). Kluckhohn (1951) defines value orientation as a set of linked propositions embracing both value and existential elements. Alazaizeh et al. (2016) state that assessment of values and site significance is important in developing heritage tourism attraction.

de Groot and Steg’s (2010) research shows that value orientation is better in predicting pro-environmental behavior. They further suggest that future research should also look at the role of value and how values can be employed in understanding and fluctuating human pro-environmental behavior. In another research by Alazaizeh et al. (2016), the importance of conservation management should be spell out through preservation value to encourage the tourists to shape tourists’ positive attitude and support direct management actions.

H2: Value orientation is significantly affecting tourists’ attitude.

2.3 Stimuli: Awareness of Consequences

Awareness of consequences (AC) is defined as whether someone is aware of the negative consequences for others or for other things one values when not acting pro-socially (Groot & Steg, 2009). The verbal and overt behaviors of an individual might be influenced by what that individual believes of the consequences following their actions, or what has resulted or followed some particular actions in the past
In a research done by Hoyos, Mariel, and Hess (2015), their study aims to understand the public beliefs and attitude towards environmental change in order to identify the key motives and barriers that stimulate or prevent action. Their findings found that awareness play important role in shaping attitude. Preserving the archaeological sites can be hampered by the lack of awareness from local community, visitors or authorities. The present study plans to examine the awareness of archaeological tourists on their impacts towards the sites caused by their behavior.

H3: Awareness is significantly affecting tourists’ attitude.

2.4 Organism: Attitudes

Attitude and subjective norms (perceived social pressure for a particular behavior) are always influenced by behavioral intent, which may affect behavior (Fishbein & Ajzen, 2015). McKenzie-Mohr, Nemiroff, Beers, and Desmarais (1995) found that while pro-conservation attitudes predicted the behavioral intent, pro-conservation attitudes only occasionally predicted pro-conservation behavior. This is especially true when pro-conservation behavior requires significant effort to perform.

The literature show that pro-environmental behavior is mostly influenced by attitude. Bitanyi et al. (2012) in their research conducted on illegal hunting activity found that attitude affects wildlife hunting practices among local community in Tanzania. In another research conducted among the Korean and American students by Kim, Jeong, Hwang (2012) on climate change, they findings indicated that attitude of and individual is positively affecting their intention towards the pro-environmental behavior.

H4: Tourists’ attitude is significantly impact tourists’ pro-environmental behavior.

2.5 Response: Pro-environmental behaviors

Halpenny (2010) defines pro-environment behavior as any action that promotes or results in the sustainable use of natural resources. Similarly, Sawitri, Hadiyanto and Hadi (2015) state that pro-environmental behavior refers to any action taken by an individual or group to promote sustainable use of the environment and to enhance the quality of the environment. In other words, any activities related to human behavior that are able to gain resources without harming the environment. Nevertheless, human activities are often the major cause to the environmental problem. Human frequently fail to perform behaviors that are able to lessen their impacts on the environment. Therefore, the ultimate goal of promoting pro-environmental behavior focusing on low-impact behavior and long-term conservation behavior (Kim, Airey, & Szivas, 2011) is to conserve and preserve the archeological sites. Zhang, Zhang, Zhang, and Cheng (2014) further enhanced the lexicon of pro-environmental behavior from tourism aspect through voluntarily reducing pollution generated by daily life and being concerned with the eco-environmental quality of a tourist site.
3. RESEARCH METHODOLOGY

3.1 Study Site and Sample

The current study focuses on two archaeological sites located in Malaysia, namely Lenggong Valley World Heritage Site, Perak and Bujang Valley, Kedah. Lenggong Valley is situated in small district that lies in Hulu Perak. The valley is located in between two mountains, the Titiwangsa Range and the Bintang Range. The valley is surrounded by lush forests, and hills featuring a numbers of rivers, waterfall, caves, and lakes. In 2012, Lenggong Valley received United Nations Educational, Scientific, and Cultural Organization make its world 953th heritage site. While LVWHS popular with its longest records of early man with single locality through three era beginning Paleolithic, Neolithic and Metal Ages, BV is famous with it religious element which serve as focal point of Hindu/Buddha propagation in Southeast Asia during the 3rd to 12th century.

The current study will employ questionnaire in collecting the data at both archaeological sites namely Lenggong Valley and Bujang Valley. The minimum number of sample needed to be able to use AMOS for statistical analysis is 200 and maximum is 400, therefore the sample for this study will be 300 participants at each site. Considering a response rate of 50%, questionnaires will be distributed to 600 tourists. Participants have to be 18 years old and above visiting Lenggong Valley and Bujang Valley at the time of data collection.

They will be presented with a cover letter that informs the participants about the purpose of the study, their rights as participants, such as the anonymity of their responses, and the name of chief investigator and the investigator’s affiliated university. Their completion of the questionnaire indicates their consent to participate in this study. Incomplete data will be excluded from data analyses.

3.2 Measures

The questionnaire comprises of two sections. The first section covers the tourists’ demographic information, motivation, times spend at the site, and frequency of the visitation. The second section comprises of items related to five constructs of the study. The measurements from different scholars will be translated into Malay language and back translated to English and lastly to be adapted to the local context. All the measurements will employ five point Likert-type scales ranging from 1= Strongly Disagree, to 5= Strongly Agree.

3.2.1 Interpretation scale (Poria, Biran, & Reichel, 2009) measures the perception of usefulness of various methods to distribute knowledge about an issue. The scale consists of 9 items which are:

1. Highlight the connection between you and your personal heritage.
2. Provide you with an emotional experience.
3. Teach you about your own religion.
4. Teach you about your nation’s history.
5. Strengthen the understanding that the site belongs your heritage and not to the heritage of other groups.
6. Enrich your knowledge of the site
7. Teach you about another nation’s history
8. Teach you about other's religion.
9. Provide you with enjoyable and entertaining experience.
3.2.2 Awareness of consequences (Mustafa, 2015) measures the possible consequences of actions that might occur in archaeological sites. The scale consists of 10 items as follow:

1. Littering has a negative effect on archaeological sites.
2. Littering has a negative effect on the aesthetic value of archaeological sites.
3. Stepping on sensitive areas as floors and loose parts in archaeological sites will cause damage to them.
4. Picking up artifacts (like pottery pieces) hinders archaeological information.
5. Digging (even the first centimeters) of the archaeological site’s surface will damage its archaeological value.
6. Climbing on monuments causes damage to archaeological site.
7. Touching decorative elements as carvings and inscriptions will ultimately cause them to disappear over time.
8. Painting destroys monuments’ surfaces in archaeological sites.
9. Having residential areas around archaeological sites has a negative effect on them.
10. Having shops close to archaeological sites has a negative effect on them.

3.2.3 Value orientation scale (Mustafa, 2015) measures the individual perception of the different values of archeological sites to the individual. The scale consists of 7 items are as follow:

1. Archaeological sites are valuable only if they produce job for people.
2. Archaeological sites are valuable only if they produce income for people.
3. The real value of archaeological sites come from creating a source of information to archaeologists.
4. The real value of archaeological sites comes from creating places for education.
5. Archaeologists sites should be preserved for future generations.
6. We should regulate tourism if it affects archaeological sites negatively.
7. We should spend money to protect archaeological sites.

3.2.4 Attitude Statement (Kim, Airey, & Szivas, 2011) evaluate the visitors’ attitudes toward a site with world heritage designation. The scale consists of 9 items as follow:

1. Image of World Heritage Site will improve the country’s image.
2. Image of World Heritage Site makes the destination as the highlight of the country.
3. Destination with the label of World Heritage means that it is worth to visit.
4. Destination with the label of World Heritage Site increases my desire to visit the destination.
5. Destination with the label of World Heritage Site enhances its appeal compared to other non-designated historic sites.
6. Destination with the label of World Heritage Site means it is a “must-see” attraction.
7. Visiting destination which has the label of World Heritage Site would make me feel proud to be there.
8. My desire to visit the country would be increased if the destination is label with World Heritage Site
9. My desire to visit the country repeatedly would be increased if the destination is label with World Heritage Site.

3.2.5 Pro-environmental behaviour scale will be adopted from Kim, Airey, Szivas (2011) to assess pro-environmental behaviors of tourists with 6 items. The six items are as follow:

1. I intend to behave in a way that will not harm the plants and animals.
2. I will avoid painting in archaeological sites.
3. I will inform the person in charge in the gallery if I discover special artifacts.
4. I will not climb on the monuments/features of the archaeological sites.
5. I will not collect artifacts from the sites.
6. I intend to become more involved in preserving issues.

4. DISCUSSION AND CONCLUSION

According to Chia (2016), there is an urgent need to manage and balance the need for conservation, development, and tourism in archaeological rich area. Although archaeological tourism contributes significantly to the economic development, conservation and preservation work must be well enforcing to protect the sites from mass visitation. There is opinion that prevent the sites from receiving tourists. This opinion, however does not really work when some archaeological sites are charging tourists for entrance fees to secure fund for digging, conserving, and preserving the sites. What is more essential is to develop a master plan and enforce the existing law (National Heritage Act, 2005) which clearly define the archaeologically sensitive areas and pay attention on archaeological impact assessment. Therefore, understanding tourists’ attitude and behavior is necessary for the destination marketers, conservators, local council, and developers to work hand in hand where all the archaeological sites are all well protected and at the same time the tourists are able to value and understand the past history of the country.

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ABSTRACT
The post-Soviet era ushered a new height of Russia’s political, diplomatic, and economic presence in Southeast Asia. It is undoubtedly clear that Russia has started to reorient its position outside of its current peripheral priorities. After the dissolution of the United Soviet Socialist Republic (USSR), Russia has focused on a grand re-engineering project, an important component of institutional stability. Part of the re-structuring included ambitious actions to re-brand a powerful image of her position in Southeast Asia and in Asia and the Pacific, in general. Scholars have argued that there is a lack of knowledge in terms of Russia’s relations with countries of Southeast Asia. This can be explained due to Russia’s unfamiliarity over the region’s diversity and by her insecurity with the dominance of the United States and China, among others. At present, there is a growing interest to shift the lens towards the region. Over the years, the Putin Government has established stronger links in areas of security and defense, energy development, and trade and people-to-people exchanges. This paper employs an ‘etic’ perspective analysis of the actions taken by Russia in these areas and suggests possible future actions to enhance collaboration and cooperation between Southeast Asian countries and Russia.

1. INTRODUCTION
1.1. An Overview of Russia’s Foreign Policy and Domestic Realities
The complexities of the 21st century made Russia to re-think of its geopolitical and economic position and importance not only within the Eurasian region but beyond it. After the complete break-up of the USSR in the early 1990s, Russia has placed much attention in rebuilding of its domestic institutions altogether maintaining supremacy and control over its former satellite states. The post-Soviet era was marked with great uncertainties and difficulties as Russia transition herself in upholding democratic institutions and shifting from a planned economy to a liberal one, allowing her to project a strong and powerful image globally. These underlying factors created a stigma for the succeeding governments in raising the pedestal of Russia’s place in the world.

In 2014, Russia’s global image was deeply damaged due to Moscow’s annexation of Crimea, which resulted to an extended economic sanction imposed by the European Union and the United States. This has worsened the gains from trade and created an abrupt increase in the domestic market prices of goods and commodities. The global economic and financial crisis and with particular attention to countries in the Eurozone area had led to a domino effect toward a downward shift of the Russian economy. Prime Minister Dmitry Medvedev added that, the “sanctions have done meaningful harm to Russia’s economy” (Roth, 2015).

In order to regain the lost glorious past of the USSR’s image and for modern Russia to once again become powerful, President Vladimir Putin has iterated in his pronouncements especially when he visited Shanghai, China in 2014 that Russia has employed a ‘Turning East’ strategy (Petrovsky, 2014). Bhavna Dave (2016), a Senior Lecturer in Central Asian Politics at the School of Oriental and African Studies, University of London noted that the declaration can be traced as far as the early years of Putin’s government, the “steady ‘pivot to the East’ (povorot na vostok) or ‘Pivot to Asia’ (povorot k Azii) was becoming discernible since [he] took office in 2001.” The said strategy is subsumed into three (3) main objectives of the Russian government: “(1) Accelerating development of the Russian Far East through
integration with the Asia-Pacific region; (2) Raising Russia’s profile in the Asia-Pacific region on the basis of its close partnership with China and diversifying economic partnership; and (3) Expanding economic, commercial and strategic ties with Association of Southeast Asian Nations (ASEAN) through Vietnam and Laos as well as multilateral arrangements via the Eurasian Economic Union (EAEU) and the Shanghai Cooperation Organization (SCO)” (Dave, 2016).

The diplomatic approach adopted by President Putin has directed its focus on the East or Sino-centric, prioritizing mainly on the energy sector—particularly on oil and gas supply, scientific and technology driven trade, and technical cooperation agreements. Russia’s current ‘Turn to the East’ strategy may prove to be more “durable and substantive than the past iterations, especially as the global economic centre of gravity moves inexorably from the Euro-Atlantic to the Asia-Pacific, and the region’s security dynamics become more complex” (Dave, 2016). This also proves that the said turn is part and parcel of the complete preservation of Russia’s “status as a great power” (Koldunova & Rangsimalon, 2016 in The ASAN Forum, July 2016) contradicting the increasing US-led security architecture in Asia-Pacific.

1.1.1. “Neo-Eurasianism Identity”?

Moscow has realized that the strategy should not be purely Sino-centric but has to include Greater Eurasia. Mikhail Titarenko and Vladimir Petroskii described the Neo-Eurasian identity of Russia. Both scholars argued that in Russia’s ‘Turn to the East’ have profound ideological meanings that are embedded in the Russian way of life. The cultural manifestation of the strong Russian identity has influenced the way how the Putin government has devised the type of actions it has to pursue in the Eurasian region. This culture is also a product of re-defining the web of relations engrained under the Soviet Russian system. President Putin clarified that ‘Eurasianism’ refers to the “Russian tradition of political thought, deeply rooted and demanding an historical and philosophical foundation” and that it is based on horizontal and equal treatment among all cultures, including non-preference for Russian culture. Eurasianism expounds on “best traits in humanity–good neighborliness, cooperation, mutual help and non-confrontational approach to competition” (The ASAN Forum, May 2016). Titarenko and Petroskii noted that Russia exerted efforts to overcome the Eurocentric paradigm using Eurasianism to bridge the EAEU and the Silk Road Economic Belt (SREB).

President Putin considers the Russian Far East as its gateway to Southeast Asia but the region heavily needs concrete and durable development intervention. The region is not much inhabited and considered as underdeveloped as compared to Moscow or those regions with close proximity to Europe. The government wants to tap the potential of the Far Eastern region in order to expand its influence in the Asia-Pacific. By linking the EAEU and the SREB will unlock the region’s potentials creating opportunities for investments led-growth and increasing movements of people, capital, goods, and labor. However, Russia was confronted with domestic constraints such as budgetary requirements, given that the Russian elites would generally prefer to be associated with Europe more than with Asia. Russian investors would likewise expand their businesses in Western Europe than in any parts of the Far Eastern region.

In 2012, President Putin established the Ministry for the Development of the Russian Far East (Minvostokrazvitiya) (MDFE), tasked in the “implementation of state programmes and federal targeted programmes, including long-term ones” (MDFE Official Website, 2017). Alexander Galushka was appointed as MDFE Minister in 2013. Galushka’s leadership marked the changed in the Russian Far East development strategy, as the government now has shifted from purely transport infrastructure-oriented development to a more capital intensive approach, by focusing more on trade and investments to countries in the Asia-Pacific.
Aside from the heavy spending placed in the modernization of its military and defense, President Putin has invested dramatically in the Far Eastern regions’ infrastructure sector. Prime Minister Medvedev “unveiled a new 500 billion roubles (around US$16 billion) investment programme in 2013, directing the government to commit to a funding of no less than 100 billion roubles (around US$3.22 billion) a year till 2018.” (Dave, 2016) The MDFE is also tasked in the establishment and regulation of the Special Economic Zones (SEZ) that will allow a tax-free movement of goods and commodities across the region. This strategy has attracted more investments coming from China, Japan, and South Korea.

The institution of reforms is considered as a tool for Russia to penetrate China, Japan, and South Korea. However, it can be argued that Moscow will employ a more pragmatic and realistic approach to ensure greater economic benefits, and thereby regain its great image in the region. To make this happen, the Russian government highly considers the Southeast Asian region as a dynamic hub for economic development recognizing the latter at the center of the Asia-Pacific region. The booming economies of Southeast Asian countries hold promise for Moscow to fully engage herself in the region. This paper highlights the importance of ASEAN integration as a conduit for the maintenance of regional order and will outline the three (3) areas of cooperation that holds a very positive track for a robust Russia and ASEAN relations. These areas of engagement include: (1) security and defense, (2) energy development, and (3) trade and people-to-people contacts.

1.2. ASEAN Integration and the Promise of Regional Order
On 8 August 1967, the ASEAN was established through the signing of the Bangkok Declaration among its five (5) founding members: Indonesia, Malaysia, the Philippines, Singapore, and Thailand. Its main goal is to ensure political and regional security but the central part of it is economic cooperation. It then expanded its membership in 1984 with the inclusion of Brunei Darussalam, Vietnam in 1995, Laos and Myanmar in 1997, and Cambodia in 1999. Meanwhile, East Timor has considered in applying for its membership to ASEAN in 2011 and until now, the application is currently under review.

The ASEAN is a regional organization where member states and its dialogue partners freely discuss and resolve pertinent internal and external issues and threats. The ASEAN has moved from merely a forum, to discuss political and security issues confronting its member states towards a more complex economic, social, and even cultural integration. It followed a step-by-step approach to building regional cooperation through consensus and flexibility, the ASEAN Way.

ASEAN maintains its centrality in its regional architecture with such mechanisms as the ASEAN Regional Forum (ARF), the Asia-Europe Meeting (ASEM), ASEAN Plus 3 (China, Republic of Korea, and Japan), and the East Asia Summits (ASEAN plus Australia, China, India, Japan, Republic of Korea, and New Zealand). Meanwhile, at the 12th ASEAN Summit in 2007, the Leaders decided to transform the ASEAN into a stable, prosperous and highly competitive region with equitable economic development, and reduced poverty and socio-economic disparities through regional economic integration, or an ASEAN Community by 2015, which rests on three (3) pillars: ASEAN Political-Security Community (APSC), ASEAN Economic Community (AEC), and the ASEAN Socio-Cultural Community (ASCC).

The vision of ASEAN implies promise of a regional order, which Russia greatly considers in its foreign and security policy objectives for the region. The Russian government views the fast-paced ASEAN development as a positive one. Minister of Foreign Affairs Sergei Lavrov said that the “ASEAN has established itself as a strong center of gravity in the region” (Lavrov, 2010). The brief historical development between Russia and ASEAN relations is presented in the next section.

1.2.1 Historical Narrative of Russia-ASEAN Bilateral Relations
The Russia-ASEAN relationship has a strong historical root. After the Second World War, the Russian government had provided direct assistance to countries of Southeast Asia in terms of financial aid, in the rehabilitation of their post-war economy. Minister Lavrov (2010) noted that Russia has “enjoyed particularly close relations of friendship and mutual assistance with the countries of Indochina and Indonesia. Firm friendly relations with Thailand have never been discontinued. Ties with Malaysia, Singapore, the Philippines and Brunei were established and successfully developed.” Minister Lavrov in ‘Mezhdunarodnaya zhizn’ emphasized Russo-ASEAN relations, recognizing “ASEAN as the center of the Asia-Pacific region, which will remain integral to the world economy and the formation of global polycentric architecture” (The ASAN Forum Country Report, July 2016).

The bilateral relations have been further strengthened when Russia participated in the ASEAN Regional Forum (ARF) in 1994. The ARF is an ASEAN-led institution that provides a venue to discuss regional political and security issues, and how nation states can resolve it. Russia became an official ASEAN Dialogue Partner in 1996. It has also acceded to ASEAN’s non-aggression pact, the Treaty of Amity and Cooperation (TAC) in 2004, and together with the United States, joined the East Asia Summit (EAS) in 2011.

In the article entitled, “Can Russia be a Leader in East Asian Economic Integration?” (2016), Ekaterina Koldunova, Associate Professor at the Moscow State Institute of International Relations (MGIMO University) said that the “Russian leadership saw an easier way to become involved in regional cooperation: by officially joining regional institutions.” Through these channels, Russia’s presence and participation become more visibly involved in the integral processes in the Asia-Pacific regional integration. This has been highlighted in 2012, when Russia hosted the Asia Pacific Economic Cooperation (APEC) Summit. The Summit was a vehicle for Russia to “bridge the gap between its political and economic performance in the region…Russia proved its ability to be a game-changer for regional economic cooperation, proposing new approaches” for the region’s development (Koldunova, 2016).

Some of the important Russia-ASEAN cooperation agreements include the Joint Declaration on Partnership for Peace and Security, and Prosperity and Development in the Asia-Pacific, the Joint Declaration on Progressive and Comprehensive Partnership, the 2005-2015 Comprehensive Program of Action (CPA), and the Agreement on Economic and Development Cooperation (Kozyrev, 2016).

Russian-led EAEC signed a Free Trade Agreement with Vietnam in May 2015, to express the former’s desire to integrate with the ASEAN economies. The Russian government has hosted the 20th anniversary as an ASEAN Dialogue Partner on 19-20 May 2016 in Sochi, Russia, which aimed to form a mechanism of “networked integration” between the EAEU, AEC, and SCO (Kozyrev, 2016). The development of the EAEU allows Russia to establish partnership among East and Southeast Asian markets. The current members of the EAEU include Armenia, Belarus, Kazakhstan, Kyrgyzstan, and the Russian Federation. The EAEU is also aimed at targeting efficiency that will maximize the gains in the free movement of goods, services, capital, and labor. This also indicates that the Russian government has raised its priorities over the ASEAN region as an indispensable partner for economic, political, and social development as characterized by sustainable, inclusive, and equitable growth. Meanwhile, the risk of conflict in the South China Sea (SCS) is high. The ASEAN claimants countries embroiled in the SCS dispute are facing tension that when provoked may escalate to a war. Russia sees the ASEAN as a platform for dialogue to ensure the continued maintenance of peace and stability. Ian

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Official Website of the Eurasian Economic Union. Available at: http://www.eaeunion.org/?lang=en#about
Storey, Senior Fellow at Institute of Southeast Asian Studies (Yusof Ishak Institute) said that Kremlin does not want to offend China and Vietnam, her close partners in the region making it difficult to take stand on the said dispute. As such, Russia maintains a more relaxed–a neutral policy in the SCS dispute (Lavrov, 2010). The Russian government has encouraged the claimants to abide with international law in resolving peaceful settlement of disputes and pointed on the importance of upholding the rules enshrined under the United Nations Convention on the Law of the Seas (UNCLOS).

The Russian government also emphasized that claimant states abide by the 2002 ASEAN-China Declaration on the Conduct of Parties in the SCS (DoC) and its related agreements. In 2010, President Barack Obama has declared its pivot to Asia-Pacific strategy. As a global economic and political leader, the United States acts in benevolence in the maintenance of the region’s status quo. It sees the Asia-Pacific as a new locus of economic development that will greatly beef-up its interests. Russia has to be more cautious of its engagement given that the United States has taken hold of power where it wants to engage with. The only way for Russia to penetrate the region is through China and its One Belt, One Road Initiative (OBOR) linking towards the Southeast Asian door. The next section highlights the three (3) areas where Russia can deeply engage with ASEAN member states allowing her to gain access to the said door.

2. DISCUSSION
2.1 Russia’s Three Areas of Cooperation in Southeast Asia

Given its soured relationship with the European Union and the United States, Russia considers ASEAN’s unique role as pivot of regional integration and as a key player in the complex Asia-Pacific security environment. Russia enjoys a very cordial and warm partnership especially with ASEAN members such as Vietnam, Laos, and Thailand. This section examines the extent of engagement where Russia can proceed with in its pursuit of Southeast Asia.

It was noted during the Valdai Discussion Club together with the Habibie Center in Jakarta last 2015 that despite the current positive partnership, the relations can be considered as sporadic–not consistent as seen through the way Russia has not been participating in some of the high profile diplomatic talks in the EAS (Lavrov, 2010). This can be understood in two ways. First, Russia’s attitude can be attributed to her notion of supremacy and the maintenance of her image as a European at the same time an Asian power–a geopolitical and economic leader of its own right. Russia straddles two continents making it easier for her to navigate her interests–maintaining her clout in Central Asia and all the way to East Asia.

Second, Russia is currently facing various domestic problems. For instance, with regard to the practice of illiberal economic policies, high rate of corruption, and the centralized power allowing her to alter or change the direction for policies, to divert people’s attention from domestic woes (Smith, 2016). However, despite these obstacles, Russia is a ‘game-changer’ in the region. The increasing prioritization of regional connectivity, Russia holds greater advantage in securing her interest but at the same time, will effectuate major changes in the process of regional integration especially in the ASEAN level (Koldunova, 2016).

2.1.1 Security and Defense

Over the last two decades, Kremlin had significantly placed much attention to an ambitious plan of modernizing its military force. New military assets were procured replacing the old Soviet-style military and defense assets. Koldunova & Rangsimalon (in The ASAN Forum, July 2016) argued that “Russia matters as one of the world’s leading players, a major exporter of arms and a country with military potential, a national with similar political views to those of some of the ASEAN states, and a supporter of ‘sovereign democracy’ with an autonomous foreign policy and refusal to interfere in the internal affairs of others.” Notwithstanding the views raised by the authors on non-intervention to internal affairs
of others, it can be explained that Russia has, to a certain extent has violated this. As Russia regains her position as one of the most powerful states, she has used the military as means to increase its clout during its invasion of Georgia in 2008, the intervention in the civil war in Syria in 2013, and the annexation of Crimea in 2014. The operations undertaken by Russia are considered as positive actions to ensure peace and stability in those conflict-ridden areas. Russia acts as a ‘guarantor of peace’ by means of securing the region through instituting modern military and defense system. However, it can also be noted that despite the ostentatious display of power and the heavy prioritization placed over its military and defense sectors, Russia is still crippled in terms of available funding to this grand geostrategic plan. Adding to this, the global financial crisis altogether contributed to its ailing military force.

Moreover, Storey (2015) added that, “[i]n 2010, Putin announced a ten-year $650 billion programme to modernize Russia’s military…Russia’s defense budget almost doubled between 2010 and 2014 – from US$58.7 billion to US$84.5 billion – to become the third largest in the world after the United States and China.” Russia is also one of the top exporters of defense assets and is heavily engaged with arms trade. “Two thirds of Russia’s arms exports are to Asia with India (39%) and China (11%) being its main customers” (Storey, 2015). At present, India and China are both looking for alternatives—to diversify its sources. Amidst the underlying disputes in the SCS, Southeast Asian states have increased their budgetary allocations for defense and military capability development.

Vietnam actually “buys almost 90 per cent of its arms from Russia...[and] has purchased six Kilo-class submarines, six Gephard-class frigates, six Tarantul class corvettes (built in Vietnam), six Svetlyak-class patrol vessels, 32 SU-30 fighter jets and air defence missile systems. Russia is refuelling its nuclear-capable bombers in Vietnam while Indonesia will purchase “two Kilo-class submarines from Russia...[and it] has been buying SU-27 and SU-30 fighter jets, transport and attack helicopters in recent years.” In 2014, the United States has temporarily banned its arms sale to Thailand following the military coup. This allowed Russia to re-consider its export market for weapons and defense technology. The “Russian T-90 tanks are to replace part of Thailand’s ageing US-made tanks...[and] also brought a number of MI-17 helicopters from Russia.” (Storey, 2015)

Moreover, “Russia has also offered to provide Myanmar, Indonesia, and even Cambodia with advanced civilian nuclear technology.” Russia is also interested at arms sales to Malaysia particularly on fighter jets and missile systems.93

Aside from expanding its military presence in ASEAN through arms trade, by which the United States is her main competitor, the Russian government is valued in its ability to provide capacity building training to ASEAN states especially in subject matter expert exchanges (SMEEs) and training in counterterrorism, maritime security, search and rescue, and other related humanitarian efforts.

As a ‘guarantor of peace’, Russia saw the opportunity as member in the ASEAN Defence Ministers’ Meeting (ADMM) Plus. The ADMM Plus was established in 2010 by the ASEAN member states including Australia, China, Japan, India, Republic of Korea, New Zealand, Russia, and the United States. The purpose of the ADMM Plus is to “strengthen security and defence cooperation for peace, stability, and development in the region.” Further, to contribute to the realization of the APSC. By participating in this endeavour, Russia can contribute through its expertise in arms and defense system modernization by means of scientific and technological innovation. Russia can also respond in terms of humanitarian


93 Ibid.

94 Official Website of the ASEAN, “About the ASEAN Defence Ministers’ Meeting (ADMM-Plus)”, 14 January 2015. Available at: https://admm.asean.org/index.php/about-admm/about-admm-plus.html
assistance and disaster relief operations, whenever the need arises. On 4 May 2016, the Russian Pacific Fleet ships had joined the ADMM Plus 2016 International Naval Exercise in Brunei Darussalam. The Exercise allowed Russia to share her expertise in “communication maneuvers, stimulate patrolling of a designated water area and take part in joint antiterrorist actions with counterpart naval forces from other countries” (Russian News Agency, 2016).

Russia is not only interested in the development of the military hardware and defense capability including interoperability between the Russian forces and the forces under the ADMM Plus but also considered the ASEAN region as an important export partner for energy development—particularly with oil and gas.

### 2.1.2 Energy Development

Energy is considered as one of the critical elements in ensuring the region’s sustainability. Experts determined that ASEAN member states are expected to experience shortage of energy supply in the next decade. The shortage can be attributed to the fast-paced development of the industrial and manufacturing sectors in the region. Thus, greater supply of oil, gas, and other renewable energy sources are needed. Russia has a comparative advantage in terms of this area. Andrew Wood (2013), Associate Fellow of the Russia and Eurasia Programme at Chatham House stated that the “Russian state has become increasingly dependent on its oil and gas sector, and on its natural resources more widely.” In its Energy Strategy 2030, new nuclear power plants will be established in Russia to supply domestic consumption, and in order to re-allocate the current supply of gas for global export. Russia has inherited this type of policy from the Soviet-style intervention in the oil and gas sectors. It has become heavily dependent on oil and gas, making it more difficult to enter new markets. Southeast Asian countries have other sources of energy especially imported from their partner Arab states. New developments in gas exploration have taken place especially in Indonesia, Malaysia, and the Philippines. Considerably, these maritime states of Southeast Asia have looked for alternatives, to lower the prices of oil and gas for their domestic market consumption.

Meanwhile, the Putin government has established new infrastructures (e.g. railway system, airport, seaport, and SEZ) in the Russian Far East as possible key to enter the Southeast Asian market. It is also trying to diversify its market by expanding outside the Siberian region, and extending it to supply natural gas with China and Japan. Russia is also known for its innovative technology and research, which could bolster energy partnership with Southeast Asian states. New plans have been made that will open its energy market in Southeast Asia. Russia has secured new energy agreements with Vietnam, as one of its strongest allies. “Gazprom and the state-owned Petro Vietnam are completing explorations for hydrocarbons in offshore oil and gas fields…[p]roduction is expected to reach full capacity towards the end of 2016” (Wood, 2013). The last sphere of engagement where Russia can consider in its geostrategic plan is through trade and people-to-people contacts.

### 2.1.3 Trade and People-to-People Contacts

Russia is moving away from the current strategy of heavy trade with Europe. Today, Kremlin is diversifying its domestic market to supply goods and services to China, Japan, and several countries of Southeast Asia. Though there is a modest level of trade relations with Southeast Asian countries, Russia needs to offer variety of products to the Asian market. The ASEAN market is ripe and attractive for investors but Russia accounts for only about 1% of the ASEAN total trade (Sumsky and Kanaev, 2014). Both authors said that one of the major impediments lies on the non-existence of “diasporas in the region to rely on as agents to expand its trade relationship with Southeast Asian states. Unlike the United States, Japan or South Korea, it has no capacity to penetrate the regional markets by the means available to transnational corporations.” As a World Trade Organization (WTO) member, Russia can now have leverage in terms of trade negotiations and at the same time bounded by the WTO rules. According to
Zubacheva (2015), Russia has “taken upon itself the role of a third party in 20 disputes and is a complainant in two cases against the EU (countering the European Union’s anti-dumping measures on imports from Russia and measures related to the energy sector). These developments show that Russia is taking steps to start available instruments more actively and support its stand on major trade policy issues.”

At the Russia-ASEAN Business Forum in Sochi, Russia on 19-20 May 2016, Deputy Economic Development Minister Alexey Likhachev announced that Russia’s trade with ASEAN countries had grown by 20% in the first quarter of 2016. Major products exported to ASEAN countries include machinery, metals, and food. In 2015, Russia’s trade amounted to “US$13.7 billion. The volume of Russian direct investment [totalled] US$698 million in 2012-2014…[and] tourism is one of the most promising sectors with more than 2.3 million Russians visiting ASEAN states in 2014.”

Most Russians are now considering the Southeast Asia region as a tourist destination while students from Malaysia, Thailand, and Vietnam are looking for scholarship opportunities in Russia. Meanwhile, Russian tourists in Thailand recorded at more than a million visitors in 2013 (Press TV, 2015). In terms of the study on Russian language and culture, President Putin had opened the Russkiy Mir Foundation (or the Russian World Foundation) to promote the Russian way of life. In the MGIMO University, the ASEAN Centre was established. Its mission is to “spread information about the ASEAN-Russia dialogue partnership, to facilitate development of economic linkages, cultural, scientific and educational exchanges as well as people-to-people contacts between Russia and the ASEAN member countries, to carry out and support research on problems of ASEAN and its individual members.”

Russia is expecting to conclude several trade deals via the EAEU and ASEAN as a regional bloc. It wanted to secure a free trade agreement (FTA) with Laos given that it has ratified its FTA with Vietnam via the EAEU in 2015. The Philippines is currently holding the ASEAN Chairmanship and it best for Russia to take on this opportunity. The Philippines has also secured defense and trade cooperation with Russia when President Rodrigo Duterte has visited Moscow in October 2016. However, the economic partnership can be considered as limited because the EAEU and ASEAN are both different entities as a regional economic grouping, which would add difficulty in terms of how goods and services will be facilitated using the common tariff arrangements. The ASEAN does not have a Common External Tariff (CET) and the EAEU does not have a well-defined institutional structure like the ASEAN.

In order to address the limitations on market penetration, Makarov and Sokolova (2016) explained that the Russian government needs to focus on linking EAEU and the Silk Road Economic Belt (SREB). The scholars added that the SREB is not only a “transport route to move Chinese goods to Europe but has a broader meaning as China reacts to various conditions, including its economic slowdown and the growing presence of the US in Asia…[this will allow Russia to] integrate its transport system into a regional network; strengthen industrial cooperation among neighboring countries; developing the core of a more ambitious project of cooperation in greater Eurasia.” The partnership will not only open its

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95 Ksenia Zubacheva, “Being a Member of the WTO may not be that Easy for Russia”, Russia Direct. Available at: http://www.russia-direct.org/analysis/being-member-wto-may-not-beeasy-russia

96 ASEAN Centre Official Website, MGIMO University, Ministry of Foreign Affairs of the Russian Federation. Available at: http://asean.mgimo.ru/en/about-centre

97 Ibid.


99 Ibid.
corridors to the Chinese market but it will spread towards Mongolia, Japan and the Republic of Korea on the east, India on the south, and especially creating new networks in Southeast Asia. However, Korostikov (2016) argued that the maritime trade route “remains economically preferable despite all talk of land routes.” The Russian government needs to strike the balance on which strategy should it prioritize for the Southeast Asian market.

All ASEAN member states including Australia, China, Japan, New Zealand, and South Korea are currently developing the Regional Comprehensive Economic Partnership (RCEP). The RCEP will establish cooperation in areas of trade in goods and services, economic and other technical cooperation, and competition, among others. This will comprise a much larger market. The Russian government should rethink to consider greater partnership in this area. The RCEP is also considered as an alternative to the Trans Pacific Partnership (TPP), which poses as a potential threat for Russia as ASEAN states will be more interested of the benefits they can accrue with the TPP than with the EAEU.

The last section highlights the recommendations in meeting the ends and eventually presenting the prospects for Russia and Southeast Asian relations.

3. CONCLUSION AND RECOMMENDATIONS

3.1 Meeting Targets and the Future of Russia–Southeast Asian Relations

Given Russia’s new strategy in dealing with countries of Southeast Asia, the paper recommends three (3) possibilities on how to enhance its current bilateral economic and international relations. First, Russia needs to institute domestic reforms before engaging deeper with countries of Southeast Asia. After the complete dissolution of the USSR, an ordinary Russian citizen is confronted with institutional power vacuum primarily controlled at the national/central level. Transitioning towards the so-called post-Soviet ‘democratic’ system proved to be a failure. It often depicted as premature and in the eyes of the West, the type of institution elicit illiberal democratic governance system. The Putin government has failed in some ways to capture in responding to the interests of the citizen, in providing the basic services. The economy is also weak due to imposed sanctions—an eventual stark collapse if not regulated properly. There is a need to rebuild its tainted image; and a closer rethinking of its domestic and foreign policies are recommended.

Second, Russia needs to offer diversified products and services to countries of Southeast Asia. If it wants to attract investor vis-à-vis to its positive economy, it has to allocate more resources in building the Russian Far East. It needs to build more infrastructures, transportation and communication links, and establish regulatory measures to eliminate corruption, thereby reducing negative transaction costs. It has to use the present institutional arrangements via the route of EAEU and ASEAN in forging and securing trade agreements. Since Russia has recently joined the WTO as an official member, it can use it to project that it will abide to the rules and procedures of just and fair trading schemes. It is also recommended that Russia needs to further boost the present Russia-ASEAN Business Council that will encourage economic cooperation, promote investment activities, create socio-cultural awareness, and exchange innovative technologies, among others.

Third, Russia needs to abide with regard to the international law in its conduct of relations with other states. It has to maintain and preserve peace and stability through its present political position. The ARF, EAS, and SCO can all be avenues for Russia to discuss and recommend peaceful settlement of disputes. If it wants to gain the approval of Southeast Asian countries on the issue of SCS dispute, it has to support the claimant states in their resolve over the issue. However, it needs to maintain its positive relations with China and not to offend President Xi Jinping’s government as well.

It is evident that Russia had employed a more pragmatic approach in its engagement with Southeast Asia—in terms of political, economic, diplomatic, and socio-cultural matters. However, there are several
constraints for Russia to meet its targets such as domestic realities, economic stability, the expansion to the Far East, and the maintenance of its global image amidst the rising tensions in the SCS dispute all proved as challenges for the Putin Government.

If Russia wants to project an image as powerful and effective global player, it must consider developing the three (3) areas of cooperation: security and defense; energy development; and trade and people-to-people contacts. Putting the pieces together will allow Russia in attracting much attention to the vibrant economies of Southeast Asian states. At the end of the day, the Russian government must secure a great deal—setting its foot in the Southeast Asian soil is one of the key drivers in enlarging its agenda in the region. Eventually, the Russian government might yet consider in developing a grand and ambitious geopolitical and economic strategy if it wants to secure its place in the world.

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Assessing Psychomotor Domain in Higher TVET Educational Programme

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ABSTRACT

Universiti KL (UniKL) has introduced a new educational framework, Higher Technical and Vocational Education and Training (HTVET) Model, which emphasises on knowledge and skill delivery using a global-focused curriculum to increase the competitiveness and marketability of the university’s graduates. Using the HTVET Model, experiential learning is emphasised through effective use of latest technology and industry-standard equipment. UniKL’s engineering programmes in particular use a hands-on approach to hone psychomotor skills and to give more opportunities to our students to experience learning by doing. Psychomotor assessment methods are also constructively aligned with learning outcomes that are relevant to the current industry. Constructive alignment is essential for ensuring that learning approaches will result in achievement of learning outcomes, including those within psychomotor learning domain. Hence, this paper will highlight the tools and types of assessments that are high in validity and reliability to evaluate students’ psychomotor skills in an HTVET setting.

1. INTRODUCTION

The tertiary education landscape in most parts of the world is undergoing a period of significant change following globalization, knowledge economy and technological advances. Malaysia is no exception to this transformation as proven by the Malaysian Educational Blueprint 2013 - 2025. The blueprint highlights the critical need for global, balanced, holistic, entrepreneurial graduates cum life-long learners. These new demands entail the need for universities to evaluate the relevancy of its curricular approaches and outcomes in order to ascertain whether their current educational model are able to equip students with new competencies and enhance employability.

To ensure Malaysia is able to produce graduates for the various traditional and emerging technologies, the blueprint has formally the government’s recognition of Technical and Vocational Education and Training (TVET) programmes to be at par with traditional academic models. For technical universities like University of Kuala Lumpur, the move is an opportune time for it to further promote and upgrade its Value-based Higher TVET Educational Model (Figure 1).

In today's context, most of the companies are looking for graduates with skills set (know-how) especially in doing things namely practical experiments in industries. Due to that, a university or higher education institution need to embed these skills set in their curriculum. One initiative towards this matter is to have more percentage of psychomotor domain in curriculum. The psychomotor domain is especially important in the lab work. It describes the coordination between the student’s brain and body. Obviously, this is an important domain in relation to the lab environment. The emphasis on laboratories has varied over the year. While much attention has been paid to curriculum and teaching methods, relatively little has been written about laboratory instruction. As an example, in surveys of the articles published in the Journal of Engineering Education from 1993 to 1997, it was found that only 6.5 percent of the papers used laboratory as a keyword. From 1998 to 2002, the fraction was even lower at 5.2 percent.

In engineering field, practical experiments and projects lie at the heart of the relationship between meaning and understanding. The design of practical work must reflect industrial needs.
According to Doughty et al. (1992), said the engineering students see themselves as essentially practical. Laboratory work therefore, seen as an important component of their formation.

In order to emphasize the importance of embedding the right psychomotor skills, university must address the right tools to evaluate or assess this psychomotor domain. This is to ensure that there is a
constructive alignment between assessment types and teaching and learning activities. One of the
famous assessment that relate to psychomotor domain is through lab work or lab experiment. Lab
experiment is crucial in the education for engineers, hence, the experiments are integrated in the
engineering curriculum to prepare students for engineering experience and practice prior to their
graduation (Al-Bahi, 2007). The most effective method to teach students to do something is by asking
them to perform the task. Therefore, by conducting the laboratory experiments. Students learn by
practicing the skills that cannot be learned theoretically.

2. METHODS

This paper has investigated and reviewed the information around technical education on how they assess
the psychomotor skills and to give more opportunities for students to experience learning by doing. This
study includes proceeding papers (Lason et al. 2007; Kamilah et al. 2012; Zaghoul 2001), journals
(Maizam 2005; Maizam & Hasanul, 2007; Romanas & Jonas, 2007; Lyle & Albert 2005; Guillaume
and Nandini 2006; Norrie 2016; Catherine et al. 2003). and electronic references (Declan et al. 2005)
as well as UniKL related documents (We For Asia Blueprint, Course Design and Delivery handbook
(CDDH). For a strategic search of the articles that were published in terms of assessment in
psychomotor area, the search was conducted using some keywords such as assessment in engineering
education, integrating learning and assessment in lab work, assessing students’ psychomotor skills and
some terminologies in assessing psychomotor skills in engineering or technical education. Merriam
(2002) states that one of the strategies to gather and analyse the data can be built around documents
which is the entire study can be performed through reviewing and evaluating the documents. Bowen
(2009) mentioned that the document analysis should involve skimming (superficial examination),
reading (through examination) and interpretation so that the finding can be analysed and summarized in
a comprehensive way. The similar method was also being used by Ashari, Rasul & Azman (2014) in
exploring the student career choice in Malaysia.

3. RESULTS AND DISCUSSION

This initial survey of literature reveals eleven most common assessment methods to assess
psychomotor skills. These are practical assessment, laboratory work (a few types), OSTE - Objective
Structured Technical Examination, classroom tests, laboratory experiments, laboratory instruction,
blended problem-based learning and challenge-based lab instruction (Table 1). The tools used to run
these assessments have been named in the literature as laboratory practice assessment (common to a few
types of assessment), practical experiment in most science-based courses; lab skills, checked lab work
comprising notebook, formal report and graded checklist; different components of OSTE, and others
(see column 2 of Table 1). The tools in turn are classified into 10 types as follows (see Column 3 of
Table 1)
1. Assessment tool in assessing Engineering Students
2. Assessment tool in assessing most science-based courses
3. Three Domain Model (TDM)
4. Assessment tool to evaluate students’ Basic Electrical Engineering skills
5. Assessment tool in engineering courses
6. A tool to administer classroom tests in engineering courses
7. Practical skills for Basic Electronic Laboratory
8. Conceptual, design, social and professional skills in engineering education
9. An approach of blending PBL and conventional teaching method
10. STAR – Software Technology for Assessment and Reflection

There are various rationales for using these assessments as outlined in Column 4 of Table 1. A cursory analysis of these statements suggest that firstly, these tools have been selected as assessment tools because they are ‘essential’ in the development of skills required of engineers as is evidenced from the following descriptions of each type of assessment or tool:

1. Essential tool in assessing engineering students
2. Essential tool to develop the formation of technologists

Secondly, the types of skills assessed include laboratory practices, decision-making, basic electrical engineering, content specific knowledge, and experimental skills, ability to work in team and communication skills, as evidenced from the following statements:

1. To improve laboratory practices in engineering discipline
2. To provide a better tool in decision-making for engineering courses
3. To provide the most effective tool in assessing the basic engineering abilities in Basic Electrical Engineering.
4. An instrument to develop students’ experimental skills, ability to work in team and communication skills.

This may suggest that assessment of psychomotor skills should be viewed across assessment domains and is multi-dimensional in nature i.e. psychomotor skills present themselves through the channels of cognitive and affective domains.

Thirdly, it is observed that the introduction of these tools other than the laboratory work is driven by the need to improve practices, provide alternative assessment method, and to assess beyond just testing for content and to vary assessment as just a written piece of work as it evidenced from the following statements:

1. To revise the current laboratory report method
2. An approach to tackle the content-specific knowledge
3. Designing effective laboratory course in Electrical Engineering
4. Alternative assessment to replace lab reports
5. An added component in the assessment model which totally based on written verbal communication’

It is also noted that lab skills are described as including safety, breadboard techniques, equipment, handling techniques measurement techniques, analysis and logical development of student work, notebook reporting, and formal reporting are some of the identified elements of the educational lab experience.
<table>
<thead>
<tr>
<th>No.</th>
<th>Types</th>
<th>Tools</th>
<th>What</th>
<th>Rationales</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Practical assessments</td>
<td>Laboratory practice assessment</td>
<td>Assessment tool in assessing engineering</td>
<td>Essential tool in assessing engineering students</td>
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<tr>
<td></td>
<td></td>
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<td>students.</td>
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<tr>
<td>2</td>
<td>Laboratory work</td>
<td>Laboratory practice assessment</td>
<td>Assessment tool in assessing engineering</td>
<td>Alternative assessment to replace lab reports</td>
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<td></td>
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<td>students.</td>
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<tr>
<td>3</td>
<td>Laboratory work</td>
<td>Practical experimental in most</td>
<td>Assessment tool in assessing most</td>
<td>Essential tool to develop the formation of</td>
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<td></td>
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<td>science-based courses</td>
<td>science-based courses</td>
<td>technologists</td>
</tr>
<tr>
<td>4</td>
<td>Laboratory work</td>
<td>Lab skills</td>
<td>TDM (Three-domain model)</td>
<td>The added component in the assessment model</td>
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<td></td>
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<td>• Checked lab work</td>
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<td>which totally based on written verbal</td>
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<td></td>
<td></td>
<td>• Notebook</td>
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<td>communication.</td>
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<td></td>
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<td>• Formal report</td>
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<td></td>
<td></td>
<td>• Graded checklist</td>
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<tr>
<td>5</td>
<td>OSTE - Objective Structured Technical Examination</td>
<td>Different components of OSTE</td>
<td>Assessment tool to evaluate students' Basic Electrical Engineering skills</td>
<td>To provide the most effective tool in assessing the basic engineering abilities in Basic Electrical Eng.</td>
</tr>
<tr>
<td>6</td>
<td>Laboratory work</td>
<td>• Laboratory practice</td>
<td>Assessment tool in engineering courses</td>
<td>To improve laboratory practices in engineering discipline</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Simulation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Classroom tests</td>
<td>A set of classroom tests</td>
<td>A tool to administer classroom tests in engineering courses</td>
<td>To provide a better tool in decision-making for engineering courses</td>
</tr>
<tr>
<td>8</td>
<td>Laboratory experiments</td>
<td>● Laboratory practical test</td>
<td>Practical skills for Basic Electronic Laboratory</td>
<td>To revise the current laboratory report method</td>
</tr>
<tr>
<td>9</td>
<td>Laboratory Instruction</td>
<td>● Hands-on laboratory</td>
<td>Conceptual, design, social and professional skills in engineering education</td>
<td>An instrument to develop students’ experimental skills, ability to work in team and communication skills.</td>
</tr>
<tr>
<td>10</td>
<td>Blended problem-based learning</td>
<td>PBL in Mechanical Engineering courses</td>
<td>An approach of blending PBL and conventional teaching method</td>
<td>An approach to tackle the content-specific knowledge</td>
</tr>
<tr>
<td>11</td>
<td>Challenge-based lab instruction</td>
<td>A tool used Electrical engineering course</td>
<td>STAR – Software Technology for Assessment and Reflection</td>
<td>Designing effective laboratory course in Electrical eng</td>
</tr>
</tbody>
</table>

In UniKL, current practice for practical skills, methods used are lab experiment, simulation, demonstration, fieldwork, practicum, project, trouble-shooting of problem, students to design experiments, industrial attachment and teaching factory approach as figure 2 below.
4. CONCLUSION

Applying science to everyday life requires both theory and hands-on practicum. While engineering programs became more theoretical, industry continued to require individuals who possessed more practical skills. New criteria were created that required adequate laboratory practice. Laboratory plans that included instrumentation replacement and refurbishment were now required for every program.

The design of practical work must reflect industrial needs. We believe these to include team working skills and dealing with technical rigour with the demands of novel problems. A further benefit of planning the practical component of the engineering program around some set of objectives such as suggested in this paper will be the possibility of designing assessment of the
practical skills developed by students in a manner that reasonably assesses the capability of the students to perform tasks that matter in the practice of the profession.

6. REFERENCES


Deconstruction in *Pledoi Malin Kundang* Poem as an Adaptation of the Legend of Malin Kundang

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ABSTRACT

This study analyzes the deconstruction in *Pledoi Malin Kundang* poem (2007) by Indrian Koto which is an adaptation of an oral tradition of *Malin Kundang* legend. The poem tells the Legend of *Malin Kundang* in a different perspective by using the first person perspective with Malin as the narrator of the story. In the grand narrative of the legend of *Malin Kundang*, Malin is always positioned as the guilty party and does not get the space to defend himself. But in this poem Malin gets the chance to "speak up". Based on the theory of deconstruction proposed by Jacques Derrida found that the selection of point of view in the poem is able to tear the grand narrative of Malin Kundang story. There are three new things that Indrian Koto displayed through the adaptation of *Malin Kundang* legend. Those are Malin's hatred of his homeland, the identity problem of Malin as a fatherless child, and Malin's relationship with his mother which is conflict-ridden. The three new things have opened space for readers to "postpone" the meaning of the *Malin Kundang* story that has taken root in the minds of Indonesian society. The readers who have always been directed to defend the mother figure and immediately blame Malin as the ungodly child, invited not too easy to justify. Thus, *Pledoi Malin Kundang* poem has given a new nuance and refreshing the popular Indonesian legend of Malin Kundang.

1. Introduction

The legend of *Malin Kundang* is originated in West Sumatra. Like other folklore, the story of *Malin Kundang* began from an oral tradition that is spoken from one generation to the next. The story is then reproduced in various media such as prose (short stories and novels), poem, and film. In prose, a fairly complete version is represented by the novel *Rebab Pesisir Selatan, Malin Kundang* (1993) written by Syamsuddin Udin et al. In addition, Malin Kundang also appeared in a collection of short stories for children titled *Legenda Malin Kundang Si Anak Durhaka and 7 Dongeng Populer Lainnya* (2015). Even similar short story versions can be found on folklore websites such as http://dongengceritarakyat.com. While the short story parody version is written by A.A. Navis entitled *Malin Kundang, Ibunya Durhaka* (2005). This legend has also been adapted in poetic form with the title *Malin Kundang* by Joko Pinurbo (1999). Then a few years later Indrian Koto tried to deconstruct the Malin Kundang story by creating a poem entitled *Pledoi Malin Kundang* (2007). Moreover, Malin Kundang movie version firstly appeared on the big screen in 1971 which was directed by D. Djajakusuma. The next film and television series of Malin Kundang continues to be developed by different film brands.

What interesting about the transformation of medium in *Malin Kundang* story is that there are some changes in narration of the story. This phenomenon shows that the process of transition from a medium to another is able to open “space” for the storyteller to create and develop the story. Nevertheless, the changes made to a folktale are often regarded as a negative action. Sapardi (2013) seems to have a different view. According to him, precisely the narrative change in folklore is a good and indispensable action to rescue classic Indonesian stories from extinction. In another word, folklore will be acceptable throughout the periods of time if it is
developed continuously. Sapardi further asserted that "The unchanging will die, it means entering the museum and finished." Therefore, folklore should not be anti-change.

Of course the rate of the changes in each outcome of the media are varies. The braver a narrator makes modifications on a story, the richer value of the story. The case also happens in the process of adaptation on Malin Kundang story. Most of the adaptations of Malin Kundang story still hold on to the grand narrative of the story; a boy named Malin who was cursed to be a stone because of his rebellious acts against his mother. The narratives are generally built by using the third person's point of view meaning that the story is led by an all-knowing narrator. So, it is unique that the researcher discovers a literary work telling about Malin Kundang but using the first person point of view. In fact, the changing of the point of view impacts the change of narration. The literary work is a poem entitled Pledoi Malin Kundang (2007) which is a part of an anthology of poem (2017) by a literary writer of Minang blood, Indrian Koto. This poem contains the expression of thoughts and feelings of Malin about his reasons for what so called as his rebellious acts. In the grand design of the Malin Kundang story, Malin is always positioned as the guilty party and does not get the space to defend himself. But in Pledoi Malin Kundang (2007), Malin gets a chance to "speak out" through the first person's perspective deliberately constructed by Indrian Koto.

Pledoi Malin Kundang (2007) gives a new nuance to Malin Kundang popular legend. Malin is now able to speak. He does not want to be constantly blamed. The deconstruction on a story that has long been rooted in a community certainly raises a new meaning. By analyzing the process of adaptation from Malin Kundang folklore to a poem entitled Pledoi Malin Kundang (2007), the researcher is going to find out whether the poem can construct of a new narrative of Malin Kundang story. In addition, the authors also hope that this research can reveal the meaning behind the deconstruction done by the author of the poem. So, to achieve that goal the author will use the theory of Deconstruction proposed by Jacques Derrida.

2. Literary Review
2.1. Grand Narrative of the Legend of Malin Kundang

Before becoming a legend, Malin Kundang story is often sung along with Minangkabau music by kaba (rebab player) in coastal area of South Beach, West Sumatera (Udin, 1996: 3). Like other oral traditions that always contains advices, Malin Kundang's story is read to warn children not to be bad especially rebellious against parents. The warning was conveyed by introducing the concept of "law of karma". In this case, Malin Kundang is represented as a rebellious child who was cursed by his mother to be a stone. In its distribution to various regions in Indonesia, the main concept of this story continues to be held although some of the narrative details are slightly different.

At least three sources have narrated the legend of Malin Kundang with the same grand narrative. The first source tells that Malin Kundang lived with his widowed mother. While two other sources begin this legend by introducing a whole family of mother, father and a boy named Malin Kundang. Then it is told that the father had sailed and never returned home. There is an assumption that the father died in the voyage. The absence of the father as the backbone of the family makes the mother and the child live in need.

One day, an adult Malin asked his mother's permission to sail, riding on a ship owned by a wealthy merchant. Malin's goal to sail was so noble: to improve the economic condition of his family. Malin believed that by sailing he would be successful and could bring home a lot of money to make his mother happy. At first, the mother was reluctant to let Malin go, but in the end she was devoured to see Malin's strong determination.

After years of sailing, Malin got successful. He had owned a large and magnificent private ship and married a beautiful girl, the daughter of a wealthy merchant. Together with his
wife, Malin sailed to various regions until he arrived in his homeland, a land he almost forgot. Hearing the arrival of Malin, Malin's mother immediately ran to the dock. He missed his son very much. But when the mother came to Malin, Malin just rejected his mother's presence. He pushed his mother because he was embarrassed by the appearance of his shabby mother. Another source mentions that Malin declared himself as an orphan to his wife so that he did not want to admit her mother.

Feeling annoyed that her years of waiting for his son did not get well, Malin’s mother prayed God to punish Malin. So, Malin changed into a stone.

2.2 Deconstruction

The concept of deconstruction was firstly introduced by Jacques Derrida as an attempt to review the theory of structuralism that is often too rigid in looking at a text. Derrida believes that the meaning of a text is not merely a matter of signifiers and markers but beyond that, the elements in the text can be “played” in such a way as to produce richer meaning (Castle, 2007: 80).

Deconstruction works on a literary text by dismantling the text, observing the lag in the meaning of the text and then establishing the text structure with a new arrangement to gain a new meaning (Norris, 2006: 12). The deconstruction theory sees a literary text as a complex arrangement of networks so that the emergence of the theory allows a literary text to be multi-meaning. In other words, the meaning of a literary text is no longer static, but dynamic and can continue to be developed.

Indrian Koto through a poem entitled Pledoi Malin Kundang has dismantled a text arrangement titled the legend of Malin Kundang and build the story in different viewpoints to create a new interpretation. This kind of thing naturally happens to the process of adaptation in literary works. Hutcheon (2006: 8) states that "... telling the same story with different points of view, undeniably, can create different interpretations." So, it is possible that Koto tells the legend of Malin Kundang through an unusual viewpoint in order to create a novelty.

3. Result and Discussion

Pledoi Malin Kundang is a narrative poem. According to Darmono (2016: 27) a kind of narrative poem is usually chosen to tell a story. Darmono (2016: 32) also goes on to argue that the underlying difference between poem and other forms of literary work is that of a "narrator". Through a narrator, a poet can enter the mind of the character and immerse the character's feelings. In the poem of Pledoi Malin Kundang, the narrator is Malin Kundang himself. That is why, Malin Kundang thoughts and feelings can be accurately conveyed through this poem.

Thus, through the selection of the narrator this deconstruction in this poem is clearly seen because so far the legend of Malin Kundang is always narrated by a third person (assumed to be all-knowing). Here are some of the deconstruction points found in Pledoi Malin Kundang:

3.1. Malin Kundang's relationship with his homeland and overseas lands

This poem is divided into three parts. The story begins by showing Malin Kundang's passion and motive for sailing. Here are the first two stanzas of the first part of the poem.

*because distance teaches miss*
*then, let me lift the anchor, mother*
*long ago, I want to sink in a distant sea*
*so I'm not unceasingly attacked by rampage of regret*
*as you know,*
*this land holds the pain of the past*
for a man like me
then, I create the future in my memory
greening it secretly

As mentioned earlier, this poem uses Malin's point of view as a narrator. Therefore, "I" above is Malin. In the first verse, the first and second lines are Malin's statements in seeking his mother's approval to sail. The fourth to the last verse imply Malin's motive or purpose for sailing. It is in this section that the deconstruction of this poem begins to work.

In the legend of Malin Kundang, it is told that Malin asked her mother's permission to sail because he wanted to improve his family's economic condition. But this poem describes a different motive as Malin says "so I'm not unceasingly attacked by rampage of regret". It means that Malin wanted to get away from his home in order to avoid regrets that continuously haunt him (not for economic reasons). Moreover, the statement "as you know // this land holds the pain of the past // for a man like me". Once again, Malin confirms that there was a bad thing he experienced in his homeland so that he was willing to leave his home.

"You" is addressed to the mother. It is assumed that Mother Malin knows the "pain of the past" experienced by her child.

In the second stanza, Malin says "then, I create the future in my memory // greening it secretly". "future" in this second verse could be interpreted as the land of the overseas. In other words, Malin explains that for a long time he has been reluctant to go out, leaving his hometown. This further strengthens how much pain he has at home and it has been a great motivation for him to sail.

About Malin's feelings of "pain" are shown in the third stanza.

I am a misfortune, mother, just curse me into a stone
to make pay off my miserable debt
to erase all of lamentations
so that the history need not record me
keep it behind the rocks

The first line again reveals the deconstruction. The original story represents Malin as a rebellious child cursed by his mother. However, the first line of the third stanza above clearly shows that Malin volunteers himself to be cursed by his mother because he felt himself "misfortune".

The reason Malin asked to be cursed by his mother is revealed in the next lines. The first reason is "to pay off my miserable debt". "debt" in this case is not debt in the form of money. If it is related to the previous discussion, Malin's debt is probably related to "past pain". Maybe Malin feels that he has made her mother miserable. As if the whereabouts of Malin brought suffering to her.

The second reason is "to erase all of lamentations". Who's complaining? It could be Malin's mother. Malin feels himself to be the source of "complaining," a source of misery for his mother. The last reason is "so that the history need not record me// keep it behind the rocks". "History" certainly has something to do with "the past". It is as if Malin wants to disappear from the world so that his dark past would not be a historical record.

All of these explanations lead to the conclusion that since Malin has a very bad past, he feels himself "misfortune". But who says he is misfortune? It could be that his mother who considers him as a misfortune or unlucky child. In a depressed state of shame and feeling
unlucky, Malin requested his mother to curse him. For Malin, being cursed as a stone is better than being born as a misfortune child.

In the next few verses Malin illustrates that his mother objected Malin's desire to sail. But then in the eighth verse, Malin again showed her great desire to sail and leave her hometown.

the sea, the mother, the sea always calls me
it seems that I smell another land in its depth
if I die - in any land - I want
to be buried in coral
since the sea is always honest, on any beach you stand
you will feel the same color. also the seagull

Malin tells his mother that the sea seems to call him. Moreover the next line shows that Malin prefers to die at sea to any other land, included his homeland. But why does Malin love the sea even more than his own homeland?

The answer is in the fifth stanza "since the sea is always honest..." By saying so, indirectly Malin is contrasting the "sea" to his "homeland". He misses the sea because is always honest to him. It can also be concluded that in his homeland Malin got dishonesty.

At the end of the first part of the poem, Malin again reinforced the motive of his desire to leave "home".

oh, why the sea takes everything that's left over
and washes it away to the far land?
and me, the misfortune, secretly has buried
all history with anchor. the sea teaches me
to burn all blue. and this ship
everything called sailing is another way
to burn memory.

"… buried all history with anchor.", "burning blue", and "everything called sailing is another way // burning memory" are expressions of the assertion that for Malin sailing is an attempt to dump the memory and pain of the past at his homeland.

3.2. Malin’s Identity as a Child without a Father

In the first part of this poem, it is known that Malin's motivation to sail is more dominated by the desire to get rid of the pain of the past in his homeland. But everything about this "pain" and "the past" is still vague. Thus, in the second part of the poem, Malin begins to clarify the context of his "past".

I put my life on a new one
treating her as another birth
because life is moving ahead and me, the man who is wrapped by revenge, spell, mother, at every corner of the street.

The two verses above illustrate that Malin is in the overseas and he begins to build a new life
there. "I put my life on a new one // treating her as another birth" means that Malin begins to put his hopes on the oversea and loves the land as a "second house." However, even if Malin has found the oceans where he builds a new life, Malin still carries "revenge" from his past. The "past" that became the puzzle is finally revealed in the next verse.

This is another land you believe in as another home
to him I found the face of a father whom you forget you tell about
ouch, why do not I ever question?
how flawed is the story you're written on my body.

Apparently the dark past in Malin’s life is about the father. In contrast, the legend of *Malin Kundang* generally does not concern about Malin’s father because indeed the main character who became the source of the story is the relationship between Malin and his mother. But it turns out that in this poem Malin’s father becomes important.

The statement "to him I found the face of a father whom you forget you tell about" obtains information that Malin’s mother does not give a clear statement to Malin about the identity of Malin’s father. It is precisely that Malin thinks about this father or maybe he meets the father on the oversea.

Of course, something is strange if a mother hide the identity of the father of her son. Certainly, there is a problem in their family. It is possible that Malin’s father and mother had an argument so they decided to split up. It could also be that both are unbound in marriage, and many other possibilities are associated to bad things.

If it is drawn to the social context in which *Malin Kundang* legend takes place (West Sumatra), it is known that the majorities of people there are Muslim and have not yet accepted modern thought. In the eyes of the traditional community, the whole family consists of at least a father and a mother who are legalized in marriage bonds. Identity and status in the family should be clear. In addition, Islamic law believes that God hates divorce and values adultery as a major sin. So, it becomes make sense that Malin feels hurt by his family’s "inappropriate" condition. It is seen in the last line "how flawed is the story you're written on my body" which makes it clear that the dark and painful past of Malin is nothing but the status and identity of his father.

3.3. The Relationship between Malin and Mother is Conflicted

you has lost for so long, hasn’t you?
I do not flare up what has been extinguished
if it causes you pain, make you sore
Get rid of me and stop this misfortune boy
because from, you everything and you will take it

The third part of this poem does show Malin’s defences for leaving his mother to the overseas lands. The first two lines are Malin’s defense that his loss-giving departure in his mother is not his fault. He feels that losing should not be something new for his mother. This could also be a mosaic of information to solve the Malin family’s past riddles. From these two lines it is implicitly revealed that Malin’s mother had experienced of a deep loss and Malin’s loss is not the first loss event. The first loss for his mother is the loss of a husband / lover, means Malin’s father.
Malin actually realizes that the actions he does hurts his mother. Then, he again offers himself to find the punishment of the mother "remove me and just let this wretched". The statement actually shows Malin's desperation for his "misfortune" condition and asks his mother to end bad luck in his life.

"I can not find my son anymore,
who has buried him on another island? he had time
squeezing my breast and now he ends our story.
misfortune, you are misfortune and rebellious."

The next verse illustrates the anger of Malin’s mother. She was angry because she is not able to find her son. The words refer to Malin who has changed drastically after being too long in oversea land and when returning to his native land, Malin "ends the story of him and his mother." Because Malin is no longer willing to admit he mother, she is getting worse and calling Malin as a rebellious child.

Getting a "malicious child" label Malin does not dwell, it actually re-launches his defense.

who is the disobedient? You do not teach me
about sin and miss
instead of broken twigs, roar of waves, taking revenge
"Do not sob, because men are born not for that
because your father, while sobbing put you in my womb
but then he’s gone," you said
then I learned about cruelty in the name of loss and past

Through this third stanza, Malin reverses the "ungodly" accusation to his mother. Malin feels that all the traits and bad acts that he does actually come from his mother. According to Malin, his mother educates her by instilling a sense of resentment, and not teaching about the nature of sin and longing. The wound of the past is finally revealed in this stanza that it turns out that the father of Malin impregnated Malin’s mother, then left her for granted. The wound is then lowered to Malin in the form of resentment and indifference to the sense of loss.

Malin still does not accept the allegations of his rebellion. So he continues his defences in the fourth stanza.

Who? who is the real misfortune?
I never asked to be born, by forgetting you
I hope the past soon goes out. but you never goes, mother.
then allow me to love you with this arrogance
to be all paid
to get revenge

Malin feels that he doesn’t deserve to be blamed. "I did not ask to be born" becomes a key for Malin’s pain. Adding with information obtained from the third stanza about Malin's father who is not responsible for his mother’s pregnancy, Malin feels himself to be a "victim". He was born a misfortune child. It must have been a huge disgrace he has to endure all his life. So, he is very angry at the past that his mother created with the man who had left him. So he hopes that by abandoning the land of his birth and forgetting his mother, he can escape from the past and escape from the disgrace.
But the overseas does not make Malin out of his past. Therefore, Malin, who actually holds a grudge against her mother due to the disgrace she has suffered, finally decides to be arrogant and refuses to acknowledge the mother in her return home. Malin's arrogant attitude does not dampen him to keep trying to persuade Malin to return to his "home". Malin’s mother assures that Malin "never goes away." The mother is still waiting for Malin's return.

"Every loss is another return
and you never truly go away."

However, Malin still firmly does not want to acknowledge her mother or even go home. Malin asked his mother to get him rid of her life. Malin thinks so because he realizes that his presence in his mother’s life only causes shame.

remove me from your life
of desire and shame

Malin's refusal to return to his mother apparently made her angry. Malin's mother granted Malin's request to remove her from her life, even from the life of the world. Thus, Malin's mother issued her final sentence:

"I'll give you back to every beginning
And on every ending."

The above lines are interpreted as the sentence of curse from Malin’s mother to her son. In other words, this poem does not change the ending of the legend of Malin Kundang. In the end Malin was still cursed by his mother. But at least before finding a curse, Malin has conveyed his defence so that the stigma of “rebellious child” has “space” to consider even debated. In addition, this poem also changes the general perception of a mother who is always described as a good and impeccable figure. In this poem, Malin's mother is portrayed as a person who tends to be negative about having a bleak past, being dishonest to the child and condemning his own child.

4. Conclusion

Pledoi Malin Kundang poem has brought fresh narrative or novelty into the existing grand narrative. At least, there are three new things that Indrian Koto displayed in the annihilation of Malin Kundang legend, namely the problem between Malin and his homeland, Malin’s problematic identity as a fatherless child and Malin's problematic relationship with his mother.

Literally, this poem is able to "tear" the narrative order of a popular legend. The readers, who always directly defend the mother figure and blame the character Malin, now cannot easily justify the case. Malin's defences in the poem has opened the space for the reader to "delay" the meaning of Malin Kundang's story that is cursed to be a stone.

5. References

5.1. Citations

5.2. Books
Social Development Through Transformation of Non Profit Organization to Entrepreneurship with Community Participation
(Study at Hoshizora Foundation, Yogyakarta)

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ABSTRACT

Social development will not happen without economic development, and economic development will be pointless without increasing social wealth of society. Social development approach integrate social and economic development efforts. Beside the government, many non-government organizations conduct social programs. NGOs which are non-profit oriented, have limitation in solving social problems. This is because their dependence on the fund which means that if the institution is no longer funded, the social problem solving is hard to be done. In order to survive, one of the options is transforming through entrepreneurship approach so the NGOs are able to create independent funding.

The Research used qualitative approach to obtain deeper information about transformation process of NGO to entrepreneur with local community participation at Hoshizora Foundation in Kalakijo tourism village, Bantul, Yogyakarta. The sampling technique is non probability sampling with a purposive sampling. The data collection involves literature review, depth interview, field observation, documentation.

This research attempt to take a look entrepreneurship which involves the society role. According to social development (Midgley, 2014) looks deeply at the entrepreneurship as the part of social development strategy by an individual. Although an individual has a role, role of the community is also important for the entrepreneurship in this research side. This research finds that entrepreneurship not only as an alternative funding but also an effort to enhance the community prosperity by taking a part in managing the potential in the area.

1. INTRODUCTION

An attempt to promote social welfare develops through several approaches namely social philanthropy, social administration, and social development. Social philanthropy activities rely on private donations, volunteers, and non-profit organizations to meet needs, find solutions to existing problems and create new opportunities. While most philanthropic endeavors seek to promote social welfare based on the provision of materials and services to those in needs, many of these social philanthropic bodies also conduct social development approach (Midgley, 2005). Midgley (2014) defines social development as a process of planned social change designed to promote the well-being of the population as whole in conjunction with a dynamic process of economic development. The most distinctive characteristic of social development is its attempt in connecting economic development and social. Social development explicitly tries to integrate the processes of economic and social. Social development will not happen without economic development and economic development will be meaningless without being accompanied by an increasing of social welfare in society as a whole. Efforts to integrate
economic and social policies and programs to raise people's welfare differentiate social development from the other approaches (Midgley, 2014).

Social programs are conducted by government and non-government organizations. In Indonesia, this organization is known as the LSM (Lembaga Swadaya Masyarakat), which is essentially a substitute for the term Non-Governmental Organization (NGO). Non-Governmental Organizations (NGOs) incorporated as non-profit organization have limitations in its attempt to solve social problems. This is due to NPOs dependence on donors as the source of financing, including on operational and management costs. NPOs often attract charitable donations from individuals and corporations for socially valued program or seek the grants and contracts from foundations or government sources (Tan and Yoo, 2014). However, recent dynamics in the social and economic environments have blurred the boundaries between the public, the nonprofit, and the for-profit sectors (Mair and Noboa 2003). These dynamics stem from increasing competitive pressures, including competition for decreasing donations and grants and less dependencies on current funding sources (Dees 1998). In response to these pressures, NPOs are advised to adopt more entrepreneurial management approaches (Morris et al., 2007).

Social enterprise addresses on the most pressing issues facing nonprofits today, how to achieve ongoing sustainable impact. The purpose of social enterprise is an additional funding mechanism for the organization of social programs or operating costs and a sustainable program mechanism in support of the organization's mission (Alter, 2007). Alter (2007) reveals a Hybrid Spectrum that combines economic and social approaches within an organization.

**Hybrid Spectrum**

<table>
<thead>
<tr>
<th>Traditional Nonprofit</th>
<th>Nonprofit with Income-Generating Activities</th>
<th>Social Enterprise</th>
<th>Socially Responsible Business</th>
<th>Corporation Practicing Social Responsibility</th>
<th>Traditional For-Profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mission Motive</td>
<td>• Profit-making Motive</td>
<td>Income reinvested in social programs or operational costs</td>
<td>• Shareholder Accountability</td>
<td>Profit redistributed to shareholders</td>
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</tr>
<tr>
<td>Stakeholder Accountability</td>
<td>• Profit-making Motive</td>
<td>Income reinvested in social programs or operational costs</td>
<td>• Shareholder Accountability</td>
<td>Profit redistributed to shareholders</td>
<td></td>
</tr>
</tbody>
</table>

Source: Alter, 2007

An income generating activity becomes a social enterprise when it is operated as a business. The following characteristics apply: the activity was established strategically to create social and economic value for the organization. It has a long term vision and is managed as a going concern. Growth and revenue targets are set of the activity in a business or operational plan. Qualified staffs with business or industry experiences manage the activity or provide oversight (Alter, 2007). Social entrepreneurship is an alternative approach for development in breaking the shackles of economic dependence on donors and stimulating entrepreneurship in communities (Khieng and Dahles, 2014).

Dynamics of funding in NPOs is determined by two variables: reliability and autonomy (Pratt 2004). Reliability refers to the ability to predict revenues year to year. Autonomy is directly related to the degree of dependence of NPOs on suppliers of funds to develop their mission. In the context of growing uncertainty and competition for donations, a diversified mix of funding sources has increasingly been considered a prudent strategy for reducing unpredictability (Mozos, et.al, 2016). The success of NPOs has been attributed to “their ability to diversify funding sources in response to current economic and political environments” (Berman et al. 2006). Revenue diversification
has been presented as a way to maximize the resource independence of NPOs. Having a wide variety of funding streams seems like a good way to reduce the risk of losing any single source of resources (Mozos, et.al, 2016). Aside from donor, NGOs with non-profit legal entity foundation need to be supported by the capability to seek funds independently, for example by conducting entrepreneurship.

Besides transforming into a hybrid organization, NPOs can run entrepreneurship as an alternative source of funds. To achieve variable realibility and autonomy, NPOs can use both funding sources from donors and entrepreneurship. The preferences of entrepreneurship can explore the potential of the area around the foundation by involving the community. Apart as the income for the foundation, this entrepreneurship can provide benefits for the improvement of society's welfare. Especially with the large number of non-government organizations in Indonesia, it becomes a potential for improving the welfare of the community if only they are able to collaborate with the community in social development which is integrated with economic development.

Hoshizora Foundation sees that financial independence is crucial for the sustainability of an organization. Entrepreneurship is targeted for the independence of the foundation in financing some of management and operations cost. It needs an alternative source of income so NGOs are still able to run the program in case there are some constraints of funding from donors. Indubitably, it should be done by paying close attentions to regulations establish by law. However, running a business for non-profit organizations is not an easy thing. Organizations that are accustomed to handle education for less fortunate children then turn into entrepreneurship is such a new learning for them. The limited human and capital resources are also experienced by the Hoshizora Foundation.

The author is interested to see how the Hoshizora Foundation runs entrepreneurship as one of the source of income. Entrepreneurship is not only profit oriented but in its process also involves the community. There are three kind of entrepreneurship that currently being run: Environmental Education Center (EEC), Hoshizora Tour and Travel, and Ingkung Kuali Restaurant. Researchers want to focus on EEC as entrepreneurship whose net profit is not only aimed for sustainability of the organization but also involves the community. EEC can be useful not only as one of alternative source of income for the foundation but also gives local people an opportunity to improve their welfare.

Based on the explanation above, the formulation of questions on the problem in this research study as follows:
1. How is the role of entrepreneurship as one of the source of income that supports the sustainability of non-profit organizations?
2. How is community participation in entrepreneurship initiated by Hoshizora Foundation?

2. METHODOLOGY

The research used qualitative approach. This approach was selected to explore more in-depth information about entrepreneurship for sustainability of nonprofit organization with local community participation in the Hoshizora Foundation. A qualitative approach is used in this study to obtain in-depth and accurate data tailored to the conditions in the field. (Neuman, 2013). The type of research developed is descriptive research. The sampling technique is non-probability sampling with a purposive sampling. The informants were selected based on information that needs to be obtained and deemed to have good competence as needed. Informants selected based on purposive sampling are informants who poses the following criteria:
1) Hoshizora Foundation managers who know about the history of the foundation since the establishment until today and the role of Hoshizora in EEC Farm.
2) PT Bintang Langit Mandiri Management Team who knows EEC Farm business model, marketing strategy, attempt to involve the society and obtained benefits.
3) The people of Kalakijo Tourism Village whom are involved in entrepreneurship.

Data collection methods used in this study includes:
1. Literature Studies / documents, using various sources start from books, journals, research results and media with relevant research topics. To obtain secondary data also conducted document / archive study.
2. In-depth Interviews
   In-depth interviews with selected informants through purposive sampling techniques. Interviews in this study were conducted with semi structured interview instruments.
3. Field Observation
   Observations based on research topics to find reality in the field. Observations such as EEC land and local farmers.
4. Documentation / capture images according to the target and the need to complete the interview and observation results.

3. RESULT AND DISCUSSION

The early history of the establishment of Hoshizora Foundation was initiated by some Indonesian students studying in Japan, who wanted to do something to contribute to Indonesia, so that every Indonesian child can get a decent education. Hoshizora was officially inaugurated as an organization on May 2nd, 2006. Hoshizora Foundation launched its first program called Kakak Asuh program on May 2nd 2006 coincided with National Education Day, which brings up the relationship between the child sponsorship donor (Kakak Bintang) and the sponsored child (Adik Bintang) in Indonesia. Hoshizora Foundation developed into nonprofit organization based in Yogyakarta, Indonesia. Hoshizora Foundation awards Scholarship named Beasiswa Mimpi Anak Negeri to Indonesian children who have high achievement and motivation yet having financial constraints.

At first, Hoshizora Foundation has not conduct entrepreneurship yet. Hoshizora Foundation income mostly came from Japan’s donation. At the time of the Japan earthquake and tsunami in 2011, donations for the Hoshizora Foundation were hampered. The diminishing fund has made the Hoshizora Foundation begin to run entrepreneurship to get funds to keep operations running. This experience makes the Hoshizora Foundation think of the need to develop social enterprise for the sustainability of the organization in the future. Various businesses have been run such as rental shop, clothes and takoyaki but they were not last long. The fall and rise in entrepreneurship were seen as a process of learning for Hoshizora Foundation in reading the market.

Currently there are three kinds of ongoing entrepreneurship namely Environmental Education Center (ECC), Hoshizora Tour and Ingkung Kuali Restaurant. In contrast to Ingkung Kuali Restaurant which is only 5% of profit goes to Hoshizora Foundation, the Environmental Education Center (ECC) is an entrepreneurial initiative for organizational sustainability where 100% of net profit goes to the Hoshizora Foundation. EEC is one of the revenue sources to embody 100% model of Hoshizora Foundation. The Hoshizora Foundation is committed to awarding 100% donation from Kakak Bintang (child sponsorship donor) to Adik Bintang (sponsored child). With this commitment, it can increase the trust of the donating party because donation is not used for the organization's operation and management but 100% on social
program. 80% of donations are given as school fund for children and 20% are given in the form of program to build life skills, character development and educational counseling for children. Apart from entrepreneurship, operational and management funds are derived from unrestricted funds (non educational fund donations) from Hoshizora Foundation loyal supporters.

Social enterprise may be structured as a department within an organization or as a separate legal entity (Alter, 2007). Hoshizora Foundation is incorporated as a foundation (non profit organization). The law in Indonesia has governed the legal rules for the foundation to run entrepreneurship. Based on Article 3 paragraph 3 of Law No.16 Year 2001 the foundation is allowed to conduct business activities, among others, by establishing a business entity and / or as well as within a business entity. The entrepreneurial finances are separated from the foundation. The entrepreneurship is under the legal entity of PT Bintang Langit Mandiri. The team managing entrepreneurship is separate from the management that manages the foundations’ social programs. Finance of PT Bintang Langit Mandiri includes wage and tax payments are separated from the foundation.

The pioneered entrepreneurship can still be related to the organization’s mission, e.g: EEC which is still related to the education field. Environmental Education Center (EEC) has three main principles: natural farming, education, social responsibility and empowerment. EEC mission is: (1) To provide education to the local community and public through our social enterprise (2) To provide opportunity for community to raise social and environmental awareness. EEC provides an integrated educational program with a school curriculum that introduces children to learn about sustainable natural farming, having habits to consuming healthy food and cook food using healthy ingredients. In this program children learn how to seed plant, make fertilizer, take care of livestock, and other activities. In order to help children to understand the environment, learning methods based on SEL (Social and Emotional Learning) are used. This method uses the five senses to learn and to understand the environment and help to foster positive behavior, increasing social and emotional control. However, this program has not been able to generate substantial revenues for Hoshizora Foundation until now. Although it has not such a big impact financially yet the EEC involves surrounding communities in the process.

For outbound educational programs they also work together in the form of outbound marketing along with LPMD (Lembaga Pemberdayaan Masyarakat Desa) Kalakijo. LPMD also has outbound program but it carries fun outbound concept. Although both of them have outbound program but the target market are different. If there is an fun outbound reservation made through EEC then the implementation will be submitted to the LPMD. Conversely, if there is a demand for outbound with education concept through LPMD, it will be submitted to the EEC for the implementation. If the EEC lacks of human resources for outbound preparation and implementation, then LPMD will assists them. EEC also helps to design marketing tools such as posters for LPMD outbound. As in the results of interviews with LPMD, they also cooperate together to use outbound tools. Up to now, outbound programs can go hand in hand and help each other.

To increase the benefits of entrepreneurship both in terms of income and social impact, EEC began to penetrate the market of organic products. Hoshizora Foundation works with Merapi Organic Farmers (TOM abv for Tani Organik Merapi). Through this program, EEC wants to study the market of organic products in Yogyakarta first. This program is also still in line with the value of EEC because it engage in natural education’s element that is by not using chemicals. Tani Organik Merapi is one of the largest organic vegetable suppliers for almost all of supermarkets in Yogyakarta. TOM work out a cooperative program with organic vegetable farmers located in Balangan Hamlet, Wukirsari Village, Cangkingan District, Sleman Regency to sale organic vegetables. Cooperation between Hoshizora Foundation and Tani Organik
Merapi is to supply certified organic vegetables at Superindo supermarket in Yogyakarta. The product is obtained from cooperation with local farmers in Bantul Regency, Yogyakarta. EEC targets to work with farmers with a radius of about 10km from the EEC field. According to Nina, there are many farmers in Bantul District who concentrate on organic farming now. However, they do not yet know where to sell their organic agricultural products. In addition, due to the absence of certificates, the selling price of organic agricultural products is the same as non-organic agricultural products. This makes farmers become hesitate to switch to organic farming because treatment is so arduous yet the market does not exist. EEC wants to help farmers who want to switch to organic farming. First of all EEC will provide farmers with information about organic farming. Farmers who get interested in joining will be given training on how to take care organic farming. As stated by Nina, the board of EEC Farm:

For the second development program, we want to involve people by attracting them to switch to organic farming. The form of their involvement is to supply the products, there will be 10 types of vegetable products that will be produced by farmers. And we will pack and distribute it to 8 Superindo in Jogja. To penetrate all this, we just happened to be partnership with Tani Organik Merapi (TOM). They just happened to have an LSO certificate, a label for organic products.

In the midst of a rapid development of organic farming, the potential threat of marginalization of small-scale organic farmers should be noted. The threat came from the certification process of organic commodities in accordance with the Indonesian National Standard of the Organic Food System, which was approved by the National Standardization Agency. The use of the standard is aimed to protect consumers and organic farmers so it won’t be harmed by the organic products counterfeit (AOI in Mayrowani, 2012). The cost of expensive certification and the standards and certification processes that are inconsistent with peasant culture can get rid of small farmers. In order to maintain the organic product standards and the marketing of certified products from local farmers, Hoshizora Foundation cooperates with Tani Organik Merapi (TOM) who are experienced in organic agricultural products. With certified organic products, it can increase the sale’s value of organic agricultural products. With this cooperation, it is expected to increase income so it can improve the welfare of the local farmers involved.

EEC is also planning on a production system to attract people to get involved in organic farming. EEC is planning a pricing system and supply per farmer that remains for a year to enable farmers to calculate the revenue they can earn, as Nina says:

Organic farming should cost triple times more than the conventional price. So we will apply the system of price contract, so for example one year of rice will remain Rp12,000.00. Whether it's up or down in the market, I'll still buy with that price as to facilitate the community. They can calculate how much their income in a month, it is fixed. We also give freedom to people who want to supply the product, its also depend on your ability to supply it.

EEC also educate the surrounding community about agricultural products that are becoming the current trend among consumers of organic products, one of them is sorghum. When the EEC land harvests the sorghum, women of family welfare movement member (PKK) cook it into pop sorghum. EEC provides training on how to process the sorghum. They also provide knowledge about the potential of sorghum, for example in terms of price so that they are interested in growing sorghum. Actually the sorghum market is already exists, but it faces capacity issue. This actually is a potential for the community to work together. As Nina says:

We explain to the PKK women as well. Suppose they have land, they want to plant sorghum, of course we will help them to sell it. In other word, they produce and process it and we will do the marketing. In term of market, we already have one. The product
will be distributed to our existing market. We are constrained by the product has not been consistent there. If we only rely on our land, it does not meet the needs here.

In addition to organic agricultural products, EEC also provides training to Kalakijo villagers about natural farming and permaculture. For example, people are taught how to sustain agriculture, how to plant seeds without plastic. EEC also recruits part time staff from villagers when there are activities that require additional human resources. As expressed by Reky Martha, President of Hoshizora Foundation as follows:

*So for all this time we provide free training to residents and children. It is limited for us for public employing. In our social work, we have our full time staff and there are about five part time staff from the village who often help us. We are engaged. But more than that, we want to try to build capacity building how to grow organic. So, we’ve been training a lot anyway. There are about 20 residents and there are 60 local children that we train for free.*

In accordance with the EEC’s local empowerment scores, EEC management involves the participation of local citizens. Cohen, et.all (1980) says that the form of citizen participation is divided into four forms of participation, consist of participation in decision making, participation in implementation, participation in benefits and participation in evaluation. Based on explanation, EEC engages citizens in the form of participation in implementation and participation in benefits.

From January to July 2017 there are 2 local villagers living around EEC farm who work part-time job, they work 5 days in a week to take care of plants and heifers and 2 local villagers occasionally work for the farms whenever needed. Local children in the area have access to all of our facilities and activities. Market EEC includes elementary schools (children and teachers), mid and upper SES families (domestic and international), groups. The benefits of social enterprise are used to support non-profit organizations. EEC indirectly contributes to the target population of Hoshizora Foundation. The net profit of EEC goes to support mentoring programs for 1200 children of Hoshizora Foundation. Based on the description it can be described in the model below.

Source: Alter, 2007

4. CONCLUSION

For the sustainability of social programs of an NPO, entrepreneurship can be an alternative source of income. When a non-profit organization has entrepreneurship it does not mean it will guarantee the independence of the organization financially because developing entrepreneurship requires a process that is not temporary. By all means, non-profit organizations
Entrepreneurship aims to reduce the dependence of funds on donors so that if there is a problem with donor-funded funds, the sustainability of the foundation will not be affected. Entrepreneurship development not only to pursue profit for NGO sustainability but can also involve the community to provide an opportunity to increase their income. Community participation can help to overcome the lack of resources experienced by EEC such as the quantity of staffs and land area. Social development through entrepreneurship not only supports the activities of NGOs as non-profit organizations but also play a role in improving people's welfare.

5. ACKNOWLEDGEMENT
1. Thank you to Reky Martha, M.A, President and Co-Founder Hoshizora Foundation
2. Thank you to Fitri Aulia Ikhsani for providing language help

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From the Left to the Mainstream in Pursuit of Socially-Just Development: 
The Transformation of AKBAYAN from New Social Movement to Political Party

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ABSTRACT

In the Philippines post-re-democratisation in 1986, has civil society proven itself to be the counterpoint to government and market, representing the opposite of everything that was considered pejorative about the other two, and fulfilled expectations of being the developmental panacea for the problems that beset the country? Or has its participation in governance instead led to their de-radicalisation, demobilisation and de-politicisation, and evacuated the socialist content of its ideology as its organisations became merely co-opted and liberalised private agents of public policy? This paper analyses the role of the still evolving civil society participation on political system institutionalisation in the Philippines, and its effect on national social development policy goals, using the experience of AKBAYAN, a previously leftist social movement turned political party. To understand how the nature of AKBAYAN historically evolved, the paper presents three alternative theoretical lenses of how civil society may be conceived: liberal multilateralism, radical Gramscian transformismo, and what the authors consider a synthesis of the first two – the radical reformism of contested democracy. Using intensive secondary research and key informant interviews, the researchers: provide a thick description of the transformation of AKBAYAN as a political actor from the margins to its current stature; assess the role and contributions of AKBAYAN to socially-progressive policy making and outputs; and offer recommendations on how to further institutionalise AKBAYAN’s unique role and contributions to the country’s political and social development. Moreover, in relation to the second objective, this paper scrutinises how AKBAYAN has been attempting to modify the party-ness of government, i.e., the ways by, and degree to, which mainstream political actors such as political parties attempt to shape public policy and penetrate the governance machinery to realise development goals. The ways AKBAYAN has been pursuing political party institutionalisation, and how these are transforming traditional policy cycle processes such as interest articulation and aggregation, political communication, socialisation and mobilisation, and how these in turn affect the extent and intensity of political participation of constituencies and the accountability mechanisms they deploy, are also analysed. This paper concludes that there is both promise and danger in the engagement of civil society in governance. As the case of AKBAYAN shows, for the moment, its gains still lie mainly in procedural democratic institution-building; successes in substantive democratisation measured in terms of public policy delivery continue to be plagued by questions of scale and potential to impact macro-development and social justice goals. Moreover, the post-authoritarian political, social and economic order in the Philippines remains elite-dominated to this date. Nevertheless, it is also concluded that AKBAYAN continues to retain its countervailing character as a new social movement, i.e., its enlightened critique of capitalism, revolutionary aspiration, social democratic agenda, activist energy and defensive mode of action, and it is this that sets it apart from traditional political parties. The researchers recognise that keeping this intact as the wellspring of genuine alternative development strategising to neo-liberal capitalism remains AKBAYAN’s most crucial role in Philippine political development and the key to its ability to contribute to the guarding and deepening of socially-just democratisation in the country.

INTRODUCTION

Last year, 2016, marks three decades since re-democratisation in the Philippines through what is known worldwide as EDSA People Power Revolution. In the wake of this peaceful transition, avenues
opened up for the engagement of civil society groups in governance, especially those silenced by the political disenfranchisement of the Marcos authoritarianism. The context within which civil society players inserted themselves as co-governance actors embodied everything they previously protested against and aspired to change—‘corrupt and socially-exclusionary traditional politics’. Pre-transition, the country’s political system was constituted as a strong presidentialism whose power emanated from the ability to dispense patronage among weakly-partisan, ideologically-bland, undisciplined, elitist and vote-seeking self-interested political parties.

In the 1987 Philippine Constitution, it was enshrined that party-list representatives, who shall represent the underserved sectors of society, shall constitute 20 percent of the total number of the members of the House of Representatives. In 1998, the first party list election was held, and today, 46 party list parties, among them previously grassroots-based social movements, walk the halls of the Philippine Congress. Their formal insertion into the political system was not only supposed to widen the choice for, but also give voice or say to, the underserved voting constituency they represent. As rivals to mainstream political parties, they are widely perceived to provide the kind of competition that calibrates the quality of citizen representation upwards, by uncharacteristically emanating policy that reflects a socially-progressive agenda, rather than personal vested or various other elitist-corporatist interests. This expectation rests on the claim that civil society groups as paradigms of social participation, alternative developmental agencies and building blocks of democracy (White, 1996) has the potential of transforming society and providing an alternative form of social governance (Lievesley, 1999).

Within this context, this paper asks: “With the ascendancy of civil society actors as co-players in governance in the Philippines, are they proving themselves to be the counterpoint to the government and market, representing the opposite of everything that was considered pejorative about these two? Are they fulfilling expectations of being the developmental panacea for the development problems that beset the country? Or has their participation in governance instead led to their de-radicalisation, demobilisation and de-politicisation, and evacuated the socialist content of their ideology as they became merely co-opted and liberalised private agents of public policy? This paper analyses the role of the still evolving civil society participation on political system institutionalisation in the Philippines, and its effect on national social development policy goals, using the experience of AKBAYAN, a previously leftist social movement turned political party. The researchers: (1) provide a thick description of the transformation of AKBAYAN as a political actor from the margins to its current stature; (2) assess the role and contributions of AKBAYAN to socially-progressive policy making and outputs; and (3) offer recommendations on how to further institutionalise AKBAYAN’s unique role and contributions to the country’s political and social development.

To understand how the nature of AKBAYAN historically evolved, the paper presents three alternative theoretical lenses of how civil society may be conceived: liberal multilateralism, radical Gramscian transformismo, and what the authors consider a synthesis of the first two – the radical reformism of Contested Democracy. Relative to the second objective, this paper scrutinises how AKBAYAN has been attempting to modify the partyness of government, i.e., the ways by, and degree to, which mainstream political actors such as political parties attempt to shape public policy and penetrate the governance machinery to realise development goals. The ways AKBAYAN has been pursuing political party institutionalisation, and how these are transforming traditional policy cycle processes such as interest articulation and aggregation, political communication, socialisation and mobilisation, and how these in turn affect the extent and intensity of political participation of constituencies and their accountability mechanisms, are also analysed.

In the mainstream conception of liberal multilateralism, civil society is an associational realm between the state and family populated by organisations which are separate and autonomous from the state, and formed voluntarily by members of society to protect or advance their interests or values (White, 1996). In this view, civil society is often romanticised as the idealised counter-image
of the state and market, representing everything that is good and absent in the other two: “social virtue confronting political vice, the realm of freedom versus that of coercion, of participation versus hierarchy, pluralism versus conformity, spontaneity versus manipulation, purity versus corruption” (White, 1996, pp. 178-179). Here, civil society actors find their definition not through a conflictual/confontational relations with the state, but through a cooperative, even dependent, co-existence with the state, because resources can be secured mainly from or through government. As private agents of public policy, they focus on programmes in pursuit of poverty alleviation, social justice and sustainable development.

The liberal-multilateral view is criticised by the left. In accepting the role as preferred channels for service-provision in deliberate substitution of the state, the left feel civil society actors have effectively surrendered their autonomy and accepted the rules of the capitalist game (Tedesco, 1999). Gramsci refers to this co-optive and de-politicising process as transformismo, or the channeling of radicalism to safer areas. While it is recognised that this conception of civil society is a space of freedom and power recovered from the state, this conception does not necessarily internalise the socialist project of the Marxian formulation. In this critique, “this versatile idea (of civil society) has become an all-purpose catchword for the left, embracing a wide range of participatory aspirations,… as a whole set of excuses for political retreat, … as an alibi for capitalism” (Wood, 1995, p. 238). For Woods and the left in general, all sorts of human oppressions are fundamentally rooted in the capitalist system, and thus freedoms from different forms of oppression may be won only through a totalising alternative, socialism (Woods, 1995).

Interestingly in the Philippines post-redemocratisation, a sort of new left nexus emerged by the tactical alliance between civil society groups consisting of non-government organisations, people’s organisations and social movements, on the one hand, and left-leaning/leftist forces, on the other hand, has emerged. These groups signaled their willingness to participate in parliamentary processes in the pursuit of national political and socio-economic development, rather than to continue down the revolutionary route to the same goals. Particularly from those from the left, they saw a way to conjoin their revolutionary idealism with reformist realism and seized the opportunity of doing something concrete beyond throwing critique. Their belief is that elite democracy and democracy from below continue to be the major competing strands in Philippine politics, but that the outcome of the contest does not necessarily require a complete disempowerment of one side by the other or a regression to authoritarianism (Quimpo, 2010). This belief system is known as Contested Democracy (Quimpo, 2010). Here, there is genuine and strong conviction that formal democracy, previously deficient due to its elite features, can be deepened into a participatory and egalitarian democracy (Quimpo, 2010).

The story of AKBAYAN’s continuing evolution shows its struggle to resist to be boxed in either mainstream liberal-multilateral, or Gramscian transformismo, formulations of critical engagement. Instead it claims to be consciously working towards transforming itself into a legitimate and strong mainstream political actor, but one that is genuinely rooted in, and is strongly advocating, egalitarian and participatory democracy from below. The researchers find it timely and significant to examine the validity of these premises some three decades after the optimistic rise of civil society in Philippine politics. They find the case of AKBAYAN to be instructive given that it has won in all party list elections held so far, was a major ally of, and had members appointed into major Cabinet positions in, the previous Aquino III Administration, and has seated a Senator in the current Congress. As is the ambition of all applied research, the researchers seek: Is there some lesson to be learned here about what works for political institutionalisation and social development, within the context of critical engagement by non-traditional players in governance?

2. METHODS

2.1. Overall Research Design
This is a qualitative, descriptive-explanatory research. It uses the case research method to explore in-depth, the dynamics, outcomes, challenges and lessons of the participation in policymaking of a leftist social movement turned party list party on political and social development in the Philippines. As an explanatory study, the researchers argue that there is a value-added in the participation of civil society rooted-organisations in governance because they supposedly bring the politics of the poor (Lievesley, 1999) into what is traditionally the politics of the elite, to bring to bear their collective experiences in violence and fear, misery and solidarity as well as economic and political marginality on policy-making and policy (Lechner in Lievesley, 1999). Moreover, they argue that this sort of organisation is able to accomplish this within the context of Contested Democracy, without surrendering its countervailing character. However, they argue that the relation between the nature of this organisation, as embodied by AKBAYAN, and the substantive democratisation of policymaking in process and output, is relational rather than causal because they concede that there are many other variables that could have impinged on the character and outcomes of political institutionalisation and social development in the Philippines during the period under study (1986-present). Being a case study, this research offers its findings for their value in particular contexts and in pointing areas for further inquiry rather than for their generalisability. Nevertheless, utmost objectivity was endeavoured, and hopefully this was not accomplished at the expense of critical analysis and that this combined objective and critical approach comes out evidently in the discussion and analysis of the study’s results.

2.2. Data Gathering Methods

Key informant interviews were conducted with AKBAYAN’s key personalities. These included: Mario Aguja who is now a member of the Executive Committee and was representative to the House during the 12th Congress, Mariquit Melgar, currently Secretary-General and was chief political affairs officer during the 12th Congress; Arlene Santos, previous Secretary-General, and Risa Hontiverso, current Chairperson and an incumbent Senator. The legislative office of AKBAYAN, provided much of the secondary material about AKBAYAN as a political party, and its legislative record to date.

2.3. Data Analysis Methods

In this study, the researchers used a constructivist, political-anthropological approach to politics and public policy. It is a perspective that includes both, but is certainly broader than either, group and/or elite theory. Here, policy is a cultural category and policy communities are contested political spaces. The question addressed on any political/policy issue is: ‘Whose voices prevail and how are their discourses made authoritative?’ The premise underlying this question is that dominant discourses work by setting up the terms of reference and by disallowing or marginalising alternatives (Shore and Wright, 1997). Within this approach, every stage of the policy-making process, from problem identification and agenda setting, formulation and adoption, is considered a venue for conflict, negotiation, the exercise of power, bargaining, and compromise (Anderson, 2000). How competing claims are accommodated, resolved and taken up in the policy output are considered consequential for political development, i.e., “the increased capacity of a political system to accommodate essential demands upon it” (Kornberg and Musolf, 1970).

In problem identification and agenda setting, the researchers looked at the ways AKBAYAN performed its input functions of interest articulation and aggregation, and political socialisation and communication. Did AKBAYAN change the elitist and exclusionary ways these functions were performed by traditional political parties? Three metrics were used in this assessment; the extent AKBAYAN facilitated (1) Participation; faithfully fulfilled its (2) Representation functions; and (3) contributed to National Integration (Caoli, 1986). The first and second were assessed as the extent AKBAYAN carried the politics of the poor into the politics of the elite and by the degree of integration and mass participation of previously excluded citizenries in the process. They were also assessed as the ways AKBAYAN secured essential services for a constituency from the Bureaucracy, through modifying government party-ness. The third was assessed as the ways AKBAYAN representatives provided communication links and contacts between its constituencies and the
central/national government. It was also assessed as the consistency of AKBAYAN in having its representatives elected which enhanced opportunities for citizen participation and mass action.

A desk-based policy content analysis was conducted to ascertain the nature of policies sponsored and enacted by AKBAYAN legislators. The researchers analysed if the policies were distributive or redistributive, arguing that such policies are socially-progressive in nature. Distributive policies promote private activities that are declared by supporters to be desirable, which require government support and intervention in the form of a subsidy of some kind, because they would not be undertaken without that subsidy (Ripley, 1985). Redistributive policies translate into programs that result in the shifting of wealth, property, rights, or other values among social classes or racial groups (Ripley, 1985).

3. RESULTS AND DISCUSSION

3.1. The Evolution of AKBAYAN into a National Political Party

AKBAYAN’s leaders and founding members trace the party’s inception to the events that surrounded the 1986 EDSA People Power Revolution and the profound impact of the protests on both state politics (removing Marcos) and non-state movements (the sidelining of the Communist Party of the Philippines (CPP) (Claudio, 2013.) This critical period in Philippine history changed the political landscape of the Philippines from authoritarian rule to democracy, established the relative strength of civil society, and exposed the weakness of the traditional communist movement. As Ric Reyes, one of AKBAYAN’s founding members, himself a former CPP leader, put it, AKBAYAN emerged as a “critique to political parties and realities in Philippine society, the CPP, and collapsed socialisms of the past.”

The CPP served as the backbone of the anti-dictatorship movement, the group’s guerrilla wing, the New People’s Army (NPA), led a protracted people’s war in the countryside, and organised a campaign of urban-based political dissent. Despite that, the old party failed to establish political power and ride the momentum of the people power revolution. This failure fed into a brewing internal conflict within the ranks and leadership of the CPP and resulted in the CPP’s split in the early 1990s. From this emerged two loose categories of the Philippine left known as the “reaffirmists,” or “RAs,” and the “rejectionists,” or “RJs.” The “reaffirmists” reaffirm the main tenets of the CPP, the primary Maoist principle of the protracted people’s war, and the Stalinist conception of governance through one-party dictatorship. The “rejectionists” reject those. AKBAYAN is amongst the latter. This is not to say that the CPP remains the sole influential left party in the Philippines. The dichotomy is useful in so far as it reflects the split within the CPP in the early 1990s, and allows easy categorisation of the factions within the left.

The left in the Philippines started experimenting in political and electoral participation in the past by entering into alliances with established political parties for national and local elected positions. In the 1992 elections, AKBAYAN emerged as a non-party formation composed of some civil society organisations, mass movements, and political blocs, and entered into a formal coalition with mainstream but reputable political parties. In 1995, leftist organisations tried their luck at midterm elections by endorsing candidates from the slates of traditional parties, a strategy that was discontinued, as the winning candidates eventually abandoned progressive trappings and revealed their adherence to patronage (Quimpo, 2008).

What gave new life to the left’s political project was the passage of the Philippine Party-list System Act of 1995 which allowed for the election of sectoral representatives to the Philippine Congress on the basis of nationwide proportional representation of parties. For many in the left, including the founders of AKBAYAN, this Act presented itself as an alternative opportunity to engage in politics and accumulate state power. The Party-List Act was instrumental in the midwifery of AKBAYAN into a national political party for the first time.
3.2. AKBAYAN’s Value-Added to the Policy-Making Process

3.2.1. Assessment of Representation and Participation

The Party’s founding congress in January 1998 was facilitated by four discrete political blocs. Bukluran para sa Ikaunlad ng Sosyalistang Isip at Gawa (BISIG, or the Federation for the Advancement of Socialist Theory and Praxis), was a political formation composed of cadres from the national democrat (ND) and the social democrat (SD) traditions, Christian socialists, and non-aligned activists with no previous political affiliation. Pandayan para sa Sosyalistang Pilipinas (Pandayan, or Forging a Socialist Philippines) came from the SD tradition of the left. Siglo ng Paglaya (Siglaya, or Century of Freedom) that eventually became represented by a faction of it, Padayon (to carry on), was composed of former NDs. Likewise, the group of popular democrats were former NDs (Quimpo, 2008).

These blocs were organisations that served to unite the different civil society and grassroots organisations under distinct variations of leftist political ideology, and were among the groups formed upon the split of the CPP. Each of these blocs had a strong mass movement component made up of people’s organisations (PO), grassroot organisations of farmers and fisher folk, informal settler families, women and the youth, Moro, other non-Christian peoples, and indigenous peoples and LGBT groups. True to its leftist heritage, AKBAYAN’s core constituency included different categories of the working class—regular and contractual, formal and informal in industry, service, info-tech and agriculture. The decision of the said blocs to come together in a single, national political party was rooted from the organised left’s much earlier realisation that it needed to accumulate state power in order to realise the socio-political reforms it envisioned. The AKBAYAN! Citizens’ Action Party was registered with the Commission on Elections in 1988.

Clearly, as a party list political party, AKBAYAN’s representation base was, and continues to this day to be, constituted by traditionally marginalised and excluded groups in society. It provided a radical alternative to the mainstream catch-all vote-seeking parties, and also to the cartel and patronage-oriented office-seeking parties. In contrast, it constituted as a new politics party and party of mass integration that is policy-seeking, emphasising the pursuit of socially-progressive policy goals responsive to its constituencies’ needs, demands and aspirations. In its own words:

“...In the course of the struggle for full democracy, social equity and women’s emancipation, AKBAYAN aims to establish building blocks of radical reforms. AKBAYAN employs mass pressure and ideological campaigns while taking seriously the field of engagement with government and/or the private sector to achieve concrete gains for the people and weakening elite rule. This is what distinguishes AKBAYAN from the traditional Left concept of extreme opposition, always in an offensive oppositional stance, fixated on a unilinear track to total victory, unmindful of partial gains and their beneficial results for consolidating the people’s strength, weakening elite rule and advancing the people’s welfare” (AKBAYAN, 2004, p. 6).

The strategy AKBAYAN employs in policy formulation may be called triadisation. First, its civil society partners, depending on their distinctive areas of competencies, are engaged as the technical body who will lead the actual drafting of the bill. Then its mass movements and the stakeholders-at-large of a particular policy are counted on to create the critical mass that will mobilise in support of the passage of a particular bill. Collectively, they are called the advocacy group of the triad. AKBAYAN’s legislative office constitutes the third body of the triad and performs the formal processes of legislation. Through this strategy, AKBAYAN ensures that policies formulated are responsive and relevant, and technically as well as politically-feasible.

3.2.2. Assessment of National Integration

Prior to the founding of AKBAYAN, political blocs served as the aggregator for the political interests of the social movements, where each sector forwarded an agenda that was moored ideologically to the
blocs’ strategic visions. The political blocs remained to be the main organising force in the formative years of AKBAYAN. While the various bloc-members of AKBAYAN had their respective, diverse political and ideological interests, they saw the Party as a platform to advance their interests. Because of the democratic structure of AKBAYAN, the leadership of the Party, and hence the policy directions that the Party took, were shaped largely by the relative strength of the blocs over each other. To strengthen their respective bloc’s voting powers in the Party, the blocs competed against each other in bringing in more Party members from the POs and NGOs that they organised at the local level, thereby contributing to its expansion and growth.

Upon its election to the Philippine Congress, AKBAYAN took a life independent of the blocs’ as it began to directly represent the interests of the various mass movements in the level of the House of Representatives and the larger realm of national politics. As the party grew and became involved in the parliament and in national politics, the blocs’ relevance began to erode. This required bloc leaders to shift their focus from intra-bloc politics in order to meet the demands of leading a national political party. This was the genuine attempt to live direct democracy in the Party, where civil society and mass movement organisations were enabled to formulate legislation and raise issues to Congress through the party that eroded the need for a mediator such as the blocs to represent the members. The party in effect replaced the blocs as aggregator of the political interests of the mass movement, providing an integrating link between national government and the grassroots constituencies.

3.3. AKBAYAN’s Value-Added to Party-ness of Government

In addition to its efforts to shape public policy towards the interests of its constituency, AKBAYAN also worked to penetrate the executive machinery to realise development goals. In the run up to the presidential elections in 2010, AKBAYAN decided to ally with the Liberal Party (LP) and supported the presidential and vice-presidential tandem of LP stalwarts, Benigno Simeon Aquino III and Mar Roxas. This decision was premised on the argument that the best way for the party to gain greater credibility and political prominence was for the party to match its very strong opposition to the corruption-laden leadership of Arroyo with equally potent commitment to good governance and reform politics. Aquino and Roxas were perceived by the Party to be the exact opposite of Arroyo (Reyes, 2013). They had spotless track record in terms of corruption, and were most open to the reforms that AKBAYAN was espousing, compared to the rest of the contenders in the 2010 elections. The LP tandem ran on a multimillion peso campaign that created a cult following with the slogan, “Kung walang kurap, walang mahirap,” (if there were no corruption, there will be no poverty).

This alliance brought the Party political prestige, provided a new platform for the Party to pursue the vision of the social movement, and opened an opportunity for the Party to create a network of allies throughout the government bureaucracy (Santos, 2013). AKBAYAN leaders were appointed into senior positions in government offices such as the Commission on Human Rights (CHR), the National Youth Commission (NYC), National Anti-Poverty Commission, and the Office of the Presidential Adviser on Political Affairs. Party leaders from the labour sector were also appointed to the board of the state’s two pension systems, the Government Service Insurance System (GSIS) for the public sector and Social Security System (SSS) for the private sector.

The Party evolved to more generally become a citizen’s movement as more non-aligned individuals, both from the grassroots and the middle class found the party attractive due to its good governance platform. This resulted in the Party’s more active participation in local politics which in turn extended to building alliances with progressive local government officials. This reinforced and broadened AKBAYAN’s local organising independent of bloc affiliations and politics (Santos, 2013).

All these means AKBAYAN during the Aquino III incumbency was successful in modifying the party-ness of government or the ways by, and degree to, which political parties influence governance to serve their constituencies’ interests.
3.4. AKBAYAN’s Policy Outputs and Advocacies

AKBAYAN won major victories for the advance of social justice and systemic reforms in the Philippines (Santos, 2013), as it sponsored and successfully led the enactment of (re)distributive policies. In 2012, the Reproductive Health (RH) Bill, AKBAYAN’s flagship legislation since it first earned a seat in the Lower House in 1998 finally became a law. Together with public officials from the health and social welfare departments, experts on women’s rights and reproductive health, and like-minded legislators, the Party led substantive discussions on the bill in the Lower House. AKBAYAN was also represented by its members especially from the youth and women sectors in the Reproductive Health Advocates Network (RHAN) that undertook lobbying and advocacy efforts to building public pressure for the legislation. AKBAYAN also facilitated the dialogues and meetings between the advocacy networks and the office of President Aquino to secure the incumbent administration’s support for the measure. With the very active engagement of civil society and congress, the RH network succeeded in bringing to fore issues of maternal deaths and women’s rights, overpopulation, poverty, and a glaring lack of reproductive health education, and thereby consolidated public opinion for the bill. It was the public support of incumbent president Aquino and members of his cabinet, and the combined efforts of pro-RH legislators and advocates that secured the passage of the measure despite the resolute attempts of the Catholic Church Hierarchy and the anti-RH lobby to derail the process.

AKBAYAN also considers the passage of the Comprehensive Agrarian Reform Program Extension with Reforms or CARPER as a significant accomplishment (Santos, 2013). The extension of the government’s land reform program gained support due to a very strong mass base of dispossessed farmers and tenants with the support of civil society organisations and activist legislators. They demanded government to secure their right to the land they till, which was strongly opposed by the economically- and politically-influential landed elite. With the party’s strong partnerships with legislators who understood the value of continuing agrarian reform as a means to promote rural development and social justice, CARPER was passed into law in 2009. The CARPER victory is also significant because it happened at a time when AKBAYAN was a minority in the House of Representatives, and during the presidency of Gloria Macapagal-Arroyo (GMA), whose family opposed CARPER because of their ownership of vast tracts of agricultural land that would be subjected to the program.

AKBAYAN was also a key mobiliser in anti-corruption movements and actions. Following Aquino’s victory in the presidential race, AKBAYAN led the mainly middle class efforts to bring GMA to account and rid government of her cronies (Claudio, 2013), including then-Ombudsman Merceditas Gutierrez and Arroyo’s midnight-appointee Supreme Court Chief Justice Renato Corona. GMA was accused of election cheating during the 2004 Presidential Election and of massive corruption. Likewise with Renato Corona, who she appointed as Chief Justice of the Supreme Court, despite a constitutional provision prohibiting outgoing presidents to make appointments within two months immediately before the next presidential election. In the House of Representatives, then AKBAYAN representatives Walden Bello and Kaka Bagao were among the core group of legislators that prepared the charges against Corona and Gutierrez. Corona was subsequently impeached and Gutierrez resigned. Before these, AKBAYAN marched with millions in what was known as EDSA People Power 2 to oust President Joseph Estrada who was also accused of corruption.

In these campaigns, AKBAYAN’s unique activist nature as a political party stood out as it combined its civil society advocacy with legislative intervention. The Party rallied the support of its membership to these causes, and led in organising public campaigns - from developing public messages, to the organisation of protest actions, press conferences and similar public activities.

3.5. The Continuing Challenges
Today the challenges to the Party include sustaining the gains that it has achieved through legislation, as well as overcoming the issues attending the evolving political landscape the Party needs to navigate. The struggles for the full implementation of policies such as the RH Law and CARPER, continue to be challenged by certain influential forces in society. Ensuring workers’ security of tenure, capping labor contractualisation, socialised housing implementation that requires the contribution of private developers, reintroducing restrictions to agricultural trade to promote local agricultural production, are examples of policies AKBAYAN strongly pushes but that are constantly rejected by a government that continues to subscribe to free-market economics.

AKBAYAN has also been confronted by the limits of the political terrain it is engaged with. Its realisation is that the political recognition and the positions in government the party secured were inadequate to translate into political influence that can change the power-balance during elections and thereafter. These appointments have neither allowed AKBAYAN to advance more radical reform objectives that address social inequality, empower the poor and the marginalised, and change socio-economic structures. In fact, concern has been raised about how the coalition with the Liberal Party (LP) has benefited the LP more than it did AKBAYAN. There is now wariness that the party could be used as the conscience in coalitions with mainstream political parties, mainly for these parties to gain popular support.

3.6. Insights and Lessons Learned for Future Practice

In terms of ensuring the success of citizens’ movements engaging government as political party, the AKBAYAN experience demonstrated the need for the following:

a) The organised left and civil society must respect the legitimacy of the people’s grievances for their own merit. Civil society is often occupied with advocacies for democratic and political rights, and for social justice. However, these campaigns remain distant and abstract to poor families from the D and E socio-economic demographic that are the main vote-bases of the political elites. Creating campaigns or supporting government programs that link these demographics with government institutions, or providing direct services to meet the basic needs of these constituencies, is a good starting point to organising the masses and introducing alternative politics and social organisation. It is important to translate the broad objective to reform society into smaller policy proposals that may be implemented by government. They should maximise engagement with government institutions for piece-meal proposals for reforms, as entry points.

b) Parties like AKBAYAN must be ready to play the game of power politics. It is important to meet the requirements for governance, such as managing the diverse interests of political players in bureaucracies, and creating and maintaining political alliances with key players. This requires developing sophisticated political strategies and entering into compromises with allies without giving up the party’s fundamental principles in order to balance coalition politics and navigate internal politics. As activist parties accumulate political power, they must attain a fine balance between protester and establishment roles. To manage public perception and maintain the integrity of the party, it must also continually assert independence from the ruling coalition.

c) It is important to learn the limits of coalition politics. Especially if the party is tagged a junior partner of a coalition of traditional politicians, ascending to power formally does not always mean that the activist party has true impact and leverage to implement radical reforms. The transformation of society according to the more radical standards of the social movement still entails the creation of social conditions that will set the stage for such reforms.

4. CONCLUSION
The researchers conclude that there is both promise and danger in the engagement of organisations rooted in civil society in governance. As the case of AKBAYAN shows, the gains still lie mainly in procedural democratic institution-building. As a national political party, AKBAYAN successfully penetrated both the legislative and executive branches of government. As a party list party, it has proven to be participatory, representative and integrative. Despite engaging in coalition politics with mainstream parties, it distinguished itself as a policy-seeking mass movement party pursuing socially-progressive policies.

In contrast, its successes in substantive democratisation measured in terms of public policy delivery continue to be plagued by questions of scale and potential to impact macro-development and social justice goals. Advancing radical reform objectives that address social inequality, empower the poor and the marginalised, and change socio-economic structures has proven very difficult amid the continuing dominance of self-interested vote-seeking and office-seeking parties populated by elites.

Nevertheless, the (re)distributive policy contributions of AKBAYAN so far, its continuing success in electoral contest, its continued mobilisation behind a socially-progressive development agenda and good governance reforms, its willingness to learn lessons from experience on navigating mainstream politics, are hopeful signs that its potential may still be realised. The researchers are convinced that keeping its countervailing character as a social movement as the wellspring of genuine alternative development, remains AKBAYAN’s most crucial role in Philippine political development and the key to its ability to contribute to the guarding and deepening of socially-just democratisation in the country. And to date, AKBAYAN maintains all these - its enlightened critique of capitalism, revolutionary aspiration, social democratic agenda, activist energy and defensive mode of action.

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THE RELATIONSHIP BETWEEN TRADITIONAL AS WELL AS MODERN MODES OF FINANCIAL INSTRUMENTS FOR INTERNATIONAL MARKET THROUGH ISLAMIC FINANCE

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Abstract

Islamic financial system compared to western conventional system is related to the religion of Islam. The principles of Islamic finance are based on three main factors which are mentioned in the Quran and are an important part of Islamic jurisprudence, such as Riba, Gharar and Maysir. Islamic commercial law is based on three modes which serve as the basic blocks for complex financial products. These three models are partnership based, trade based and rental based modes of financing. These three traditional modes of financing are dependent upon the size and limitations of entire markets and desires of their target customers. The modern modes of financing consist upon Islamic Insurance (Takaful), Islamic financial derivatives, Islamic bonds (Sukuk) and Istisna. Furthermore, there should not be pure economical interest in transactions; it must contribute to the social harmony. It shows balanced between equity and debt and the trade of debt must be avoided which is explicitly expressed in the pillars of Islamic banking.

Keywords: Islamic jurisprudence, Social harmony, Traditional and Modern financial instruments

1. Introduction

The principles of Islamic finance are based on three main factors which are mentioned in the Quran and are an important part of Shariah101 and Islamic jurisprudence, such as Riba, Gharar and Maysir. The concept of Islamic finance has existed since the emergence of Islam. However, it was not as developed and systematic as today before late 1970s. The main idea of Islamic finance is perhaps best described by Iqbal and Molyneux (2005, p. 6). They state

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101 Islamic law – the fundamental religious concept of Islam, namely its law, systemized during the 2nd and 3rd centuries of the Muslim era equal to 8th-9th centuries AD. (Encyclopedia Britannica)
that under Islamic jurisprudence there are two kinds of rulings, the worship ruling which governs the relationship between man and Allah, and the second being mutual dealing rulings which governs the relationship among mankind. The general principle of mutual dealing rulings is that, everything is permitted unless clearly prohibited, which includes the principle of Halal and Haram discussed earlier. They call it the “Doctrine of Universal permissibility”. Iqbal and Molyneux (2005, p.7) further state that; “In addition to the Doctrine of Universal Permissibility, Islam permits the contracting parties to agree on any conditions as long as they do not violate any Sharijah ruling. ...We call this the ‘Golden Principle of Free Choice’. As may be seen, this principle gives a very wide scope for designing contracts”. They argue that; “the purposes of such prohibitions are to provide a level playing field to protect the interests of weaker parties, to ensure justice and fairness and in general to ensure mutual benefit for the parties as well as society at large, and to promote social harmony”.

- **Interest (Riba)**

In Islam it is not allowed to either receive or pay any interest on transactions involving money. This prohibition essentially implies that the fixing in advance of a positive return on a loan, as a reward for waiting, is not permitted by Shariah. This prohibition has not been confined to Islam. According to Visser (2009, p. 39), based on passages from the Bible, the Christian Church at various times took a strong stand against demanding and paying interest. Also in the Old Testament, Jews were forbidden to demand interest on loans from their own but they could charge interest on loans given to foreigners. Perhaps, best definition of Riba is given by Iqbal and Molyneux (2007):

"In its basic meaning, Riba can be defined as anything (big or small), pecuniary or non-pecuniary, in excess of the principal in a loan that must be paid by the borrower to the lender along with the principal as a condition, (stipulated or by custom), of the loan or for an extension in its maturity. According to a consensus of Islamic jurists it has the same meaning and import as the contemporary concept of interest. (Iqbal and Molyneux, 2005, p. 9)

- **Gharar**

Translated directly from Arabic it simply means uncertainty or risk. Gharar is as important in Islamic finance as Riba. Compared to Riba, Gharar is more difficult to define clearly in financial transactions. It is one of the most difficult tasks for the experts in Shariah boards in many IFIs to agree upon when there are new products available on the markets. In this relation, Iqbal and Molyneux (2005, p. 14) state that, “jurists make a distinction between two
kinds of Gharar: Ghararahish (substantial) and Ghararyasir (trivial). The first kind is prohibited while the second is tolerated since this may be unavoidable without causing considerable damage to one of the parties. In many cases, it is simply not possible to reveal all information (not because the seller wants to hide anything, but because it is in the nature of the product). The buyer has to trust the seller”. It is Ghararyasir (trivial) that sometimes causes problems for Shariah boards to agree upon. To prevent Gharar in a transaction, the full implications of this transaction must be clearly known to contracting parties. In other words there must not be “asymmetric information” between parties because it breaches the principle of Islamic law. Elgamal (2006, p. 58) states that, Gharar translated conceptually by professor Mustafa Al-Zarqaa means “trading in risk, which cannot be defined”. He further gives us examples of naked options, financial futures, and derivatives that are not backed by tangible and verifiable assets.

- **Maysir**

Maysir is closely related to Gharar. In some papers about Islamic banking these two principles are used interchangeably even though there is a difference between these two principles. Where in Gharar the main focus is on uncertainty, Maysir, translated from Arabic “gambling”, focuses on and prohibits transactions that are based on one side’s gain at the cost of the other. Conventional banking products such as life insurance are prohibited in Islamic finance as it comes under Maysir. When gambling, the player pays a certain amount of money in the hope that he will gain much larger amount, similarly the conventional life insurance policy where the assured hopes for a chance to make a gain El-Gamal (2006).

The three principles mentioned above are the main principles of Islamic finance. However, there are some general rules under which financial transactions become void in Islamic finance. This could be a contract which involves immorality, which involves illegality against public policy, its foundation or substance is unlawful or illegal, or any other contract or agreement which directly or indirectly is contrary to the divine principles of Shariah.

2. **Literature Review**

- **Islamic finance products**

A large number of products are available in Islamic finance and the number is growing as demand for more Islamic compliant products grow throughout the world. Broadly speaking, Islamic commercial law is based on three modes which serve as the basic building blocks for other more complex financial products. These three modes are partnership based, trade based,
and rental based modes of financing. Nearly all Islamic finance products come under these three modes. The use of each mode is dependent on the purpose and size of transactions, but all of them are based on principle of Riba prohibition. One thing to remember is that, as mentioned earlier, as a result of the difference in interpretation not all of new products are universally acceptable. The three mentioned modes are covered in details below.

**Partnership based mode of financing**

Partnership based or Profit-and-Loss-Sharing (PLS) mode suggests an equitable sharing of risks and profits between the parties involved in a financial transaction, and include Mudarabah, Musharakah and other hybrid products. Theoretically, Mudarabah and Musharakah are the most desirable forms of Islamic financing.

- **Mudarabah**

  Mudarabah is an agreement between a lender (bank), who acts as an investor, and a borrower, whereby the borrower can mobilize the borrowed amount for his business activity. If profits are made they will be shared between the lender and borrower according to the mutually agreed ratios. In the case of loss the lender shares the losses in proportion to his contribution. Elazrag Hussein (2010) gives a good example; “an Islamic bank lends money to a client to finance a factory, in return for which the bank will get a specified percentage of the factory’s net profits every year for a designated period. This share of the profits provides for repayment of the principal and a profit for the bank to pass on to its depositors. Should the factory lose money, the bank, its depositors and the borrowers all jointly absorb the losses”.102

- **Musharakah**

  Musharakah is in its basic a business partnership or joint venture between two parties where one party could be a bank and the other party its customer. It is affected for a particular period like a few months, year or more than a year. Both parties agree on a certain percentage of the profit to be given to each party. The profit of the bank must not exceed the percentage of its investment in the Musharakah. The losses, if incurred, will be divided based on strict proportion to the equity participation ratio, i.e. to the capital contributed by each party. For example, if the bank invests 65 % and the customer 35 %, they must share the loss in the same ratio. “All parties, including the bank, have the right to participate in the management

of the project, but equally, all parties have the option to waive such right. All parties agree
through negotiation on the ratio of distribution of the profits generated from the project, if
any. This ratio need not coincide with the ratio of participation in the financing of the
project”. (Venardos 2005, p. 76). Musharakah is used by financial institutions for asset and/or
real estate financing, working capital financing, and etc.

Both Mudarabah and Musharakah are closely related products. Mudarabah differs from
Musharakah in the way that only bank is the investor here, whereas in Musharakah all parties
invest in the project. In Mudarabah management is the prerogative of the investor, whereas in
Musharakah all partners can manage the project based on a pre-specified agreement. And
finally, in Mudarabah the customer does not bear losses if incurred, whereas in Musharakah
profits and losses are shared based on the percentage of the investment.

Trade based modes of financing
Trade based modes of financing became available in the market much later than partnership
based mode, but its products gained dominance among other products very quickly. Because
it targeted a much larger group of investors, both private and business customers, and it also
is safer for both parties to invest in this mode of financing, compared to partnership based
mode.

- Murabaha Finance
Murabaha is an agreement between a bank and its customer. The customer requests the bank
to purchase or import commodities on his/her behalf, with a promise to buy them from the
bank at purchase price plus profit margin of the bank, and to be paid on deferred installments.
One of the most used forms of Murabaha by Islamic banking customers is home financing.
Murabaha could be named as the locomotive of Islamic finance because it was after the
introduction of Murabaha that Islamic banking assets grew at double digits. But there are
numbers of critics among prominent scholars criticizing Murabaha’s compliance with Shariah.
As Usmani states, “It should never be overlooked that originally, Murabaha is not a mode of
financing. It is only a device to escape from ‘interest’ and not an ideal instrument for
carrying out the real economic objectives of Islam. Therefore, this instrument should be used
as a transitory step taken in the process of Islamization of the economy. And its use should be
restricted only to those cases where Mudarabah and Musharakah are not practicable.” (Usmani 1998, p. 104).
This statement can be confirmed by looking at a problem that Murabaha contains. The problem is that the customer’s promise to buy commodities from bank once the bank has bought it, cannot be binding since this would be a contract in which neither side is obligated immediately to perform. The solution to this problem, that Shariah boards has come with, is allowing banks to take collateral against losses incurred from a customer’s breach of promise. Mansoor (2008).

- **Salam Finance**

As mentioned before, Shariah does not permit selling what you do not own but Salam is exempt from this condition. In Salam, as long as the commodity is specified by both quality and quantity and at full payment at spot, it is allowed to sell it in a given future date. The seller is obliged to have the commodity by the end of contract. If the seller does not have the commodity in hand at the time of execution of the contract, he/she must buy it in the market. Salam is similar to forward contracts in conventional financial system with the difference that in Salam the entire amount must be paid when signing contract. Salam is used by IFIs in agricultural financing, pre-shipment export finance, and project financing. Iqbal and Molyneux (2005, p. 25), have stated four basic rules that govern Salam:

1. The price should be paid in full at the time of the contract.
2. Goods whose quality or quantity cannot be determined by specification cannot be sold through the contract of Salam. An example is precious stones.
3. Goods can be sold only by specifying the attributes. They cannot be particularized to a given farm, factory or area.
4. The exact date and place of delivery must also be specified.

There are also three major risks connected with the use of Salam, as mentioned by Venardos (2006, p. 77), which according to him reduces the Salam’s value as a financing vehicle.

1. The risk of default by seller which could just partially resolved by obtaining some form of security from the seller.
2. The bank’s need to liquidate the goods after delivery, an inconvenience made more serious by the Islamic legal rule that a Salam buyer cannot sell the expected goods before actually taking possession of them. But this is also resolved by Shariah boards, who allows banks to sell the goods with conditions that the new contract is unconnected to the first one (buying goods
from seller), and that the goods are of exactly the same description, quantitatively and qualitatively, and with the same due date.

3. Requirement of Shariah that if at the time of delivery the seller can neither produce the goods nor obtain them elsewhere, the buyer has only two choices: either withdraw his offer, or wait for the goods to become available later, with no compensation permitted for the delay. In either case, the buyer loses all or much of the profit from the use of his money.

**Rental based modes of financing**

Rental based modes of financing have existed since the beginning of Islam. It was used mostly in relation with agricultural products. Ijarah have been the only type used in this mode, but with time and the development of new products financial institutions have added other more complicated products under this mode. The main idea of this mode is that the financial institution purchases an asset for its customer and then hands it over to him/her on rental basis Hassan (2010). This can be an operational asset, where IFI act as warrantor of the asset or financial asset, and where the customer deals directly with the supplier so the ownership titles remains with the IFI until it is transferred to the customer. The two most used products in rental based mode of financing are Ijarah and Diminishing Musharakah.

**Ijarah Finance**

Ijarah is much equivalent to leasing agreement in conventional financial system, but with a difference that Ijarah does not involve interest bearing contracts and they should be Shariah-compliant. When translated from Arabic, Ijarah means to provide something on rent. Venardos (2006, p. 170) define Ijarah as; “a contract under which the bank leases equipment to a customer for a rental fee. It is pre-agreed that at the end of the lease period the customer will buy the equipment at an agreed price from the bank, with the rental fees already paid being part of the price”.

Ijarah is the most used type of product, not only among rental based mode products but also among all products provided by IFIs, when it is concerned the acquisition of assets for businesses. Ijarah have generally been used by private customers for financing consumer goods like homes and automobiles. But recently it has gained popularity among business customers in relation with project and transportation financing. Ijarah is used for almost everything that could be leased, but some certain items that is prohibited in Sharia and a few others like fuel, food and etc. are not included in Ijarah.
- **Diminishing Musharakah Finance**

As with Musharakah, diminishing Musharakah is a business partnership with the difference that in diminishing Musharakah, at the end of partnership, one part becomes the full owner of the asset in a predetermined mechanism agreed upon, when the contract is signed. The transfer of the ownership is determined by a leasing agreement where the lessee purchases the ownership on a pro-rata basis through periodical lease payments. Iqbal and Molineux (2005, p. 22) describe diminishing Musharakah as a contract between a financier (the bank) and a beneficiary in which the two agree to enter into a partnership to own an asset, but on condition that the financier will gradually sell his share to the beneficiary at an agreed price, and in accordance with an agreed schedule. Diminishing Musharakah is increasingly used in sectors like housing and real estate, project finance, and construction. Diminishing Musharakah takes different shapes according to the shape of the transaction. A general rule is that when a customer wants to buy a commodity he/she approaches the IFI which agrees to join into partnership. The customer has to pay at least 10-20 percent of the price, according to IFIs requirements, and the rest is paid by the IFI. The share of IFI is then divided into units which the customer has promised to purchase one after another in a predefined schedule. During this process the IFI gains on rent claimed according to its proportion of share.

**Modern Modes of financing**

- **Insurance**

Insurance is one of the much discussed products in Islamic finance. Some hardliners in Islam condemn any kind of insurance arguing that insurer-insured relationship involves Gharar and Maysir and is not allowed in Islam. “*Conventional life insurance was already declared unacceptable in 1903 by some prominent Islamic scholars in the Arab countries. This was followed in 1978 by a resolution of the Fiqh Council of the World Muslim League and in 1985 by one from the Fiqh Council of the Organization of the Islamic Conference declaring that conventional insurance as presently practiced is Haram (O.C. Fisher 2001)*.” (Visser 2009, p. 102). Moderate Muslim scholars, on the other hand, argue that as long as Gharar and Maysir are separated from insurance product it is in compliance with Shariah. They state that in particular business activities such as construction, transport and investment services, the professional liability insurance is not involving Gharar and Maysir. Takaful is such an insurance product that does not involve Gharar and Maysir.

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103 Islamic Jurisprudence
• **Takaful**

Translated directly from Arabic, Takaful means cooperative or mutual insurance. Takaful is developed by Muslim scholars and economists because the conventional insurance contains Gharar which is forbidden in Islam. The main idea behind Takaful is that both insurer and insured are viewed as contributors to the pool of money which they voluntarily have agreed to share in case of loss incurred to one of them. “*Islamic insurance, or Takaful, differs from commercial insurance in that it is a cooperative form of insurance, though the actual business operations may be left to commercial firms, who act as managers, or agents, with the policy holders as their principal*” Hans Visser (2009, p. 104). There are three major Takaful models and they are as follows:

1. **Mudarabah** – derived from the Mudarabah contract, the Takaful company acts as the operator and share in the returns from the investments of the Takaful fund according to a predetermined profit-sharing arrangement. If there is no profit, the operator will receive no compensation for management services.

2. **Wakalah** – insurers appoint the Takaful Company as their agent or manager to handle all the activities of the Takaful fund in accordance with established guidelines. A predetermined fee compensates the agent or manager.

3. **Mixed model** – under this model the Takaful Company will be assured compensation under the Wakalah contract and will receive a share of profit under a Mudarabah contract as well.

• **Derivatives**

CFI derivatives include call and put options, futures, forwards, and swaps and are used for hedging, arbitrage, and speculation. From the Shariah point of view most of the derivatives provided by CFIs are deemed to be Haram i.e. prohibited for IFIs because these kinds of transactions refer to the commodities that might not be in seller’s possession. According to Khan (2008) IFIs seemingly allow derivatives for the purposes of hedging and arbitrage, but prohibit their use for speculation or gambling. As mentioned before, Islam prohibits Gharar and Maysir (gambling and speculation). However, the need for a mechanism that could help IFIs customers to manage unnecessary risk has prompted Islamic jurists and scholars to come up with some standardized liquidity and risk management products, directly based on the generally accepted Islamic financing modes. A number of products are similar to conventional financial products, Forward or futures contracts (a combination of Salam and Murabaha), call (Arbun) and put options, total return or currency swaps and etc., but
completely within an Islamic framework. Jobst (2007) States that; “Shariah scholars take issue with the fact that futures and options are valued mostly by reference to the sale of a non-existent asset or an asset not in the possession of the seller, which negates the Shariah. Shariah principles, however, requires creditors (or protection sellers) to actually own the reference asset at the inception of a transaction.” Anybody who is familiar with the rules of Shariah can see that the idea behind these derivatives goes against the very pillars of Islam. Therefore the creation and development of such products are one of the most challenging tasks for Islamic finance practitioners. The size of the Islamic derivative market is not known but is quite small and derivatives are much less widely available to IFIs than to CFIs (Visser 2009).

- **Sukuk**

Due to its similarity to conventional interest-based bonds’ characteristics Sukuk are often referred to as Islamic bonds. Like bonds, the holders of Sukuk are entitled to a regular stream of coupons and a final payment at maturity. However, in principle it is wrong to refer to Sukuk as Islamic bonds because the conventional bonds are debt transactions while Sukuk are asset-based and/or asset-backed. The difference in asset-based and asset-backed is risk associated with them. The asset-backed is much less riskier than asset based. The asset-backed Sukuk resemble the equity position in conventional system because they own a part of the underlying asset, while asset-based Sukuk are closer to debt position because the holders of asset-based Sukuk do not own the underlying asset and have recourse to the originator in case of default. AAOIFI define Sukuk as certificates of equal value representing undivided shares in the ownership of tangible assets, usufructs and services or (in the ownership of) the assets of particular projects or special investment activity (AAOIFI, 2003).

Sukuk are used mostly to finance large investment projects. After the introduction of Sukuk they are increasingly used by IFIs in order to manage their liquidity because these securities are typically short term in nature, ranging from three months to one year and which can be liquidated easily in the secondary market. As mentioned before, IFIs are not allowed to use the available conventional instruments for liquidity management as they are interest based and therefore not in compliance with Shariah. The Gulf Cooperation Council (GCC) countries have prohibited trading of Sukuk in the secondary market arguing it involves Riba. Therefore, Salam-based Sukuk and the likes are typically held to maturity in this region while in other regions leading by Malaysia the secondary market for Sukuk is growing. Although Sukuk is in its infancy stage, first issued in the late 1990s, the increasing use of it as a
liquidity management instrument has contributed to the fast growth of Sukuk market. Most of Sukuk offering have been asset-based or IjarahPepinsky (2010).

Whereas, Ijarah-based Sukuk have medium- to long-term maturities, carry a put option, and can be traded in the secondary market. In a typical IjaraSukuk structure, the originator sells assets to the Sukuk issuer, a bankruptcy-remote special purpose vehicle (SPV) created to act as a trustee for investors acquiring the assets (Iqbal and Mirakhor, 2007). Sukuk returns are tied to the cash streams generated by underlying assets held in SPVs. This cash stream can be in the form of profit from a sale, profit from a rental (Ijara), or a combination of the two. The conventional asset securitization process is used in structuring Sukuk. The Sukuk is a nascent product as well as the whole Islamic capital market is very young, therefore new Sukuk products are evolving around the world. In this relation AAOIFI issued a statement in 2008 stating that IFIs must avoid involvement of Sukuk in debt-related operations.

- **Istisna**

Istisna is used in financing goods that are not yet ready for sale and will have to be manufactured according to certain agreed criteria and requirements, with payment on agreed terms. IFSB (2008) defines it as an agreement to sell to a customer a non-existent asset, which is to be manufactured or built according to the buyer’s specifications and is to be delivered on a specified future date at a predetermined selling price. The IFI agrees to construct and to sell the project to be constructed at the bank’s selling price to the customer and thereafter it requests a third party to construct the project; Upon completion, the contractor will hand over the project to the IFI or the IFI will authorize the contractor to deliver the project directly to customer.

Istisna is used in services such as tailoring, architect and construction projects, industrial equipment, plants and machinery, ships and aircraft, contract or asset financing, in pre-shipment exports financing and usable in all other situations where goods have to be manufactured before sale. Under these transactions the payment can be flexible depending on the agreement between the bank and the client; the price can be paid up front, according to manufacturing process, at completion or installments after completion (Hassan and Lewis 2007, p. 178). Istisna is perhaps one of the most flexible products available by IFIs. Istisna offers greater future structuring possibilities for trading and financing. The contract can be cancelled at any time by any party given a prior notification time before starting the manufacturing process, but not later than that.
Conclusion

As mentioned before, theoretically that Islamic finance is based primarily on the avoidance of Riba (interest), Gharar (speculation), and Maysir (uncertainty) and exercising profit and loss sharing, which is touted as the foundation upon which all IFIs are based. Furthermore, there should not be pure economical interest in transactions. They must contribute to the social harmony. They must be balanced between equity and debt and the trade of debt must be avoided which is explicitly. The first Takaful Company is organized by IFIs, then both insurers make a periodic payment to the Takaful Company which it maintains in individual accounts for each member and these amounts can be invested in other Shariah compliant products during the contract period. As the numbers of different derivatives grow in Islamic finance, the criticism is also growing from different parts of the world by Islamic jurists and scholars arguing, that these kinds of products are not in full compliance with Shariah.

Although Sukuk is in its infancy stage, first issued in the late 1990s, the increasing use of it as a liquidity management instrument has contributed to the fast growth of Sukuk market. Most of Sukuk offering have been asset-based or Ijarah. Ijarah-based Sukuk have medium- to long-term maturities, carry a put option, and can be traded in the secondary market. Istisna is perhaps one of the most flexible products available by IFIs. Istisna offers greater future structuring possibilities for trading and financing. The contract can be cancelled at any time by any party given a prior notification time before starting the manufacturing process, but not later than that.

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Housewife Information Literation in Responding Hoax Information in the Health Field in Social Media

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ABSTRACT

This study aims to analyze the level of information literacy in housewives in addressing hoax information in the field of health in social media. Information on health is abundantly appearing on the internet, although not all of them are true and worth following. It requires housewives to have an information literacy capability, a capability that allows the individual to be aware of when he needs information, locates, evaluates, and uses the required information effectively. This research was conducted in Depok City, West Java, Indonesia, as city buffer of capital city. This research uses quantitative approach and using survey method. The sample of this research is selected using purposive sampling method. The research question is how the information literacy on housewives in addressing health hoax information in social media, as well as the difficulties and obstacles they face in collecting, processing up to address the hoax information in social media. The research benefits are aimed at the academic and social field. In the academic field, the results of this study are expected to encourage the development of library and information science in the aspect of information literacy, especially in the field of health. In the social field, the results of this study are expected to help government agencies, especially those engaged in health in disseminating information to housewives by providing information to housewives through sources and facilities and language that is easy to understand. Furthermore, similar institutions are expected to improve the quality of information disseminated and can meet the needs of public information.

INTRODUCTION

The definition of information literacy is a comprehension and a set of abilities that enable a person to realize when they need information, and also has the ability to place, evaluate, and use the information needed effectively. Critical thinking is the key in media and information literacy (The International Federation of Library Associations and Institutions, 2016). Said ability is very important in daily life. One of the information housewives need is regarding health. The overwhelming number of information available in social media could not be separated from the rapid development of information technology that dramatically changes people’s method of information searching and consuming about health (Sundar et al., 2011). As quoted by Groselj (2013), internet is “de defacto of second opinion” which is relied upon by people who is not a doctor and it strongly influence how people manage their or other people’s health.

Information regarding health in the internet is very abundant, although not all of them are correct and worth adopting. In Harian Media Indonesia, Tuesday, 9th June 2015 edition, people are reminded to be careful in selecting information. There is an example regarding information about available drugs that could not be adopted by people because each drug has a different composition that has to be adjusted to the condition of each consumer or customer. The dosage has to be measured by a doctor or a pharmacist. The community is expected to be able to select which information that could be used and which information that is only a commodity used as a ruse in sales competition. A housewife holds the most important role in a family, they act as a source and protector of health for the children and husband. Thus, the research questions will be 1) how is the information literacy level of
housewives in dealing with health information hoax in social media, 2) how do obstacles and troubles affect the development of housewives’ information literacy, from realizing the needs for certain information, finding, managing, to share the information using social media.

The benefits of this research are addressed to academic and social field. Academically, this research is expected to be able to support the development of library and information science in the aspect of information literacy, specifically in health department. Socially, this research is expected to help government institutions, especially ones that involved in health. Government institution could inform housewives by handling sources and tools with easy-to-understand language for housewives. Thus, the quality of information shared may be able to fulfill the information needs.

THEORY

ALA (American Librarian Association) in 1989 defines information literacy as follows:

“information literacy is a set of abilities requiring individuals to “recognize when information is needed and have the ability to locate, evaluate, and use effective needed information”.

The abilities mentioned which is a part of independent learning process is not only about understanding information, but also develop new meaning from individual interpretation (Information Literacy, 2006). The comprehension of ‘ability’ itself is very complex and dependent on many factors, such as perception, personal view of the world, experience, and education. Said ability will affect the quality of information produced, the higher the ability of a person, the information produced will be faster, more precise, and more accurate, while a low level of ability will result on subpar information.

Even though the concept of information literacy has a wider dimension than information skills, the list of ability explained in the definition could be used as a standard in examining information literacy. In a broader sense, the ability also related to interpersonal skills. In every communication occurs, human is the center of everything, be it information sender, receiver, source, manager, depositor, and conservationist. There are many information literacy concepts disclosed by experts. But the one used on this study is 4i (Kenali, Cari, Pakai, Evaluasi – Recognize, Locate, Use, Evaluate) which is developed by The National Library of Indonesia (Wicaksono, 2015). This concept is developed to assist in educating Indonesians’ literacy skill. Furthermore, this concept is selected to help acquiring a depiction of housewives’ information literacy in Indonesia, especially in urban areas, in dealing with hoax news and information regarding health. The ability that has to be had are:

The ability to recognize information (Kenali)

In recognizing information needs, more exhaustive questions could be managed if needed. Thus, the information needed will be clear.

2. The ability to locate the information (Cari)

After understanding the information needs, the information has to be searched to answer the questions. Information searching could use the information sources available inside or outside of the library. In searching for the information, a strategy is needed to conduct an effective and efficient search.

The ability to evaluate information (Evaluasi)
Information acquired from the search result will be evaluated. In evaluation, the aspects that need to be considered are the quality, authority, and the objective of the information, also, whether or not the information is up-to-date. Moreover, distinguishing facts, opinions, and conducting a comparison are also needed. In conducting a comparison, a “small” research could be conducted by using information from several sources and views. The valuation of information is conducted to gain valid and trusted information.

**The ability to use information (Pakai)**

After deciding an answer from the evaluated information and use it to answer the question or information needs. In using the information, we need to pay attention to ethics, especially if the information needs to be communicated to other people. For example, if the information delivered is other people’s opinion, the responsible personal has to be clear (authority).

The obstacle in information searching mentioned by Case (2002:197:277) originated from individual, relationship between individuals, and environment. Obstacles originated from an individual, such as personal traits, education level, status, and economic level, affect information searching process. To gain exhaustive information, a person has to have a specific expertise in communication, especially if the information is confidential, related to personal life and privacy. While environmental obstacles usually come from political and economic situation, such as the Constitution in Obtaining Information (including to share the information), access to information in government institutions.

**METHOD**

The research method used in this study is quantitative, which is used to describe the social reality in a community. The type of research used is descriptive, which aims to systematically and accurately depicts facts and characteristics regarding population or certain fields (Azwar, 1998:7). Data analysis unit in this research is housewives in Depok City, with characteristic as an urban area that supports the capital city of Indonesia, Jakarta. Sample is selected using purposive sampling, with the following criteria: respondent is a housewife, lives in Depok, has a child in elementary school, joined in the same social media group ‘Whatsapp’.

Data gathering technique is conducted by using survey on respondents. Acquired data then interpreted by its relationship with information literacy regarding health information. After the data is gathered, edited, and completed, it is then sorted and arranged based on the questions presented. Data classification is intended to ease interpretive analysis. Scale used in questionnaire is Likert scale. Syaodih (2007:38) explained that Likert scale model uses descriptive scale. The basic of descriptive scale is responding to someone regarding something that are stated by approval statement (approve-disapprove) regarding an object.

**Validity and Reliability Test**

This research uses construct validity by observing expertise judgement. After the instrument is constructed on certain aspects based on a certain theory, then consulted with the experts. Moreover, obstacles in the research instrument made in the initial planning has to be discerned. The higher relationship level between the score from repeated measurement, then the more reliable the scale. In this research, the reliability test of each variable is measured by using Cronbach’s Alpha. The result of instrument reliability test is 0.92, which means very reliable. The reliability test is conducted using SPSS. The value of Cronbach’s Alpha reliability level could be illustrated by the table below:

<table>
<thead>
<tr>
<th>Cronbach’s Alpha Value</th>
<th>Reliability Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Cronbach’s Alpha Reliability Level
<table>
<thead>
<tr>
<th>Range</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 - 0.20</td>
<td>Less Reliable</td>
</tr>
<tr>
<td>&gt;0.20 – 0.40</td>
<td>Slightly Reliable</td>
</tr>
<tr>
<td>&gt;0.40 – 0.60</td>
<td>Quite Reliable</td>
</tr>
<tr>
<td>&gt;0.60 – 0.80</td>
<td>Reliable</td>
</tr>
<tr>
<td>&gt;0.80 – 1.00</td>
<td>Very Reliable</td>
</tr>
</tbody>
</table>

Indicator as questionnaire composing basis

Information literacy level of housewives in responding to hoax in health information could be analyzed using 4i (Kenali, Cari, Pakai, Evaluasi – Recognize, Locate, Use, Evaluate) concept. In each ability, researcher decides indicator that will be translated into statement, resulting in 49 statements. The following is the research design/construct:

‘Recognize’ ability has 2 indicators:
Recognizing information needs

Acknowledging that accurate and comprehensive information is the basic of smart decision-making.

‘Locating’ ability has 3 indicators:
Composing questions based on information needs
Identifying various potential information source
Developing and using successful strategy to find information

‘Evaluate’ ability has 3 indicators:
Determining accuracy, relevance, and comprehensiveness
Distinguishing between fact, view, and opinion
Identifying inaccurate and misleading information

‘Use’ ability has 4 indicators:
Organizing information for practical application
Distinguishing between fact, view, and opinion
Applying information in critical thinking and problem solving
Generating and communicating information and idea in appropriate format

Standing Conference of National and University Libraries or SCONUL, provide a literacy competency level measurement standard which is:

Novice: individual who doesn’t have specific knowledge regarding the information searched and the method of searching, managing, and sharing the information;

Competent: individual with knowledge but doesn’t always practice it;

Proficient: individual with knowledge and practice it;
**Expert**: individual with knowledge and practice it maximally.

Afterwards, each indicator is represented by a question that depicts the state of respondents. The scale of information literacy level of housewives in category is:

Table 2: Housewives’ information literacy level

<table>
<thead>
<tr>
<th>Score</th>
<th>Information Literacy Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 36</td>
<td>Novice</td>
</tr>
<tr>
<td>37 – 73</td>
<td>Competent</td>
</tr>
<tr>
<td>74 – 110</td>
<td>Proficient</td>
</tr>
<tr>
<td>111 – 147</td>
<td>Expert</td>
</tr>
</tbody>
</table>

4. RESULTS AND DISCUSSION

To specifically illustrate respondents of the research, an informant profile is made. In this research, informant’s profile includes age, household expense per month (in Rupiah), and the frequency of internet use per day. Afterward, the information literacy level of housewives in responding hoax in health information will be depicted. The number of respondents that filled valid questionnaire is 38, which then became the samples of this research. Data is obtained from housewives living in Depok City, specifically ones that educate their children in Anyelir 1 Public Elementary School, Depok Baru. Based on purposive sampling method used, this location is seen as the most representative to depict the condition and situation at the field. This Anyelir 1 Public Elementary School, Depok Baru is also an exemplary school that has the best performance in Depok City.

**Respondents’ Profile**

Based on the personal data of the respondents who fill the questionnaire, the age are varied from the range of 20-29, 30-39, 40-49, 50-59, 60-69, and over 70. The various data could be seen based on the following table:

Table 3: Respondents’ age range

<table>
<thead>
<tr>
<th>Age range</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-29</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>30-39</td>
<td>24</td>
<td>63%</td>
</tr>
<tr>
<td>40-49</td>
<td>10</td>
<td>26%</td>
</tr>
<tr>
<td>50-59</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>60-69</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>&gt;70</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>38</strong></td>
<td><strong>100 %</strong></td>
</tr>
</tbody>
</table>
Based on the table above, the age range of respondents consists of 63% 30-39, followed by 26% 40-49, and the other 3% is other age range. This shows that housewives with a child at Elementary School age in Depok and actively uses social media is mostly housewives with the age range of 30-39. In the aspect of household expense per month (in Rupiah), the result shows that the distribution is varied. There are 39% of total respondents that spend Rp 2.501.000 – Rp 5.000.000 per month. Followed by 34% of respondents that spend Rp 5.001.000- 10.000.000 per month and 21 % of respondents that spend Rp 501.000- 2.500.000 per month. A more extensive data could be seen from the following table:

Table 4: Household expense

<table>
<thead>
<tr>
<th>Household expense</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 500.000</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>501.000 - 2.500.000</td>
<td>8</td>
<td>21%</td>
</tr>
<tr>
<td>2.501.000 - 5.000.000</td>
<td>15</td>
<td>39%</td>
</tr>
<tr>
<td>5.001.000 – 10.000.000</td>
<td>13</td>
<td>34%</td>
</tr>
<tr>
<td>10.000.000 – 15.000.000</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>Above 15.001.000</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>38</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

For daily internet usage frequency, 74% respondents use the internet every time they have the chance, followed by 16% of respondents that use the internet 3-6 times a day and the other 11% only use it once a day. The table of daily internet usage is as follows:

Table 5: Daily internet usage

<table>
<thead>
<tr>
<th>Internet usage in one day</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once per day</td>
<td>4</td>
<td>11%</td>
</tr>
<tr>
<td>3 -6 time per day</td>
<td>6</td>
<td>16%</td>
</tr>
<tr>
<td>Every time</td>
<td>28</td>
<td>74%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>38</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Housewives’ Information Literacy

Housewives’ information literacy in Depok City in responding to hoax information regarding health by using information literacy concept 4i disclosed by The National Library of Indonesia are as follows:

Ability to recognize information needs

Housewives could recognize information needs, whether it is when themselves, their children, or their family members are sick. 76% respondents answered that they often realize information needs for health when themselves, their children or their family members are sick. Housewives also often realize that they need information when they see or hear about other people’s sickness, this could be seen from the 50% of respondents that sometimes realize that they need information about health, and the other 45% that often do. Housewives also read news regarding health in social media pages, 50%
often do followed by the other 37% that only rarely do it. There are 68% housewives that sometimes believe in the health information found in social media, while ones that often believe it are only 11%.

The indicator of ability to recognize that accurate and comprehensive information as a basic of smart decision-making, none of respondents’ statement reach 55% of total. Although, housewives always choose verified information regarding health from the government (such as information provided by The Ministry of Health and The Public Health Office). A more extensive data could be seen from the following table:

Table 6: The ability of housewives to recognize information regarding health

<table>
<thead>
<tr>
<th>No</th>
<th>Statement</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I realize I need information when myself/child/family member sick</td>
<td>0%</td>
<td>0%</td>
<td>24%</td>
<td>76%</td>
</tr>
<tr>
<td>2</td>
<td>I realize I need information when I see or hear other people is sick</td>
<td>0%</td>
<td>5%</td>
<td>50%</td>
<td>45%</td>
</tr>
<tr>
<td>3</td>
<td>I always read news about health available in social media</td>
<td>0%</td>
<td>13%</td>
<td>37%</td>
<td>50%</td>
</tr>
<tr>
<td>4</td>
<td>I believe the health information found in social media</td>
<td>5%</td>
<td>18%</td>
<td>66%</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td>I believe the health information available in webpage or social media</td>
<td>0%</td>
<td>8%</td>
<td>58%</td>
<td>34%</td>
</tr>
<tr>
<td></td>
<td>account of proven health expert (ex: doctor)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>I always choose health information from government-approved health institution (ex: Public Health Office)</td>
<td>0%</td>
<td>5%</td>
<td>24%</td>
<td>71%</td>
</tr>
<tr>
<td>6</td>
<td>I read health information entirely from the start to the end</td>
<td>0%</td>
<td>5%</td>
<td>45%</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>I have to believe the source/author sharing the information before reading it</td>
<td>8%</td>
<td>32%</td>
<td>47%</td>
<td>13%</td>
</tr>
<tr>
<td>7</td>
<td>I ignore information that doesn’t have a clear responsible party</td>
<td>11%</td>
<td>13%</td>
<td>21%</td>
<td>55%</td>
</tr>
</tbody>
</table>

Ability to search for information

Housewives in Depok City are still unable to formulate questions based on information needs, this could be seen from Table 7 where the answer from respondents to question 1-5 has a low distribution of answer variety (no more than 50%) and evenly spread answer between never, rarely, sometimes, and often. Only in “I look for information using search engine, such as Google, Yahoo, etc” statement that there is an answer with 50% respondents. Indicator could identify various potential information sources, respondents’ answers are also varied. The average of respondents sometimes read information about health by using social media, short article, research result, and opinion and comments of other people. Housewives are not yet able to develop and use a successful strategy to
find information, this could be seen from the various answer of respondents that tends to be low and no more than 53% that answered often. A more extensive data could be seen from the following table:

Table 7: Housewives’ ability in finding information

<table>
<thead>
<tr>
<th>No</th>
<th>Statement</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I access government’s or health expert’s webpage directly when searching for information in the internet</td>
<td>21%</td>
<td>16%</td>
<td>37%</td>
<td>26%</td>
</tr>
<tr>
<td>2</td>
<td>I look for information using search engine, such as Google, Yahoo, etc</td>
<td>0%</td>
<td>13%</td>
<td>37%</td>
<td>50%</td>
</tr>
<tr>
<td>3</td>
<td>I formulate keywords of health method</td>
<td>18%</td>
<td>16%</td>
<td>40%</td>
<td>26%</td>
</tr>
<tr>
<td>4</td>
<td>I formulate keywords based on the name of disease (ex: flu, tinea versicolor, etc), then develop it after scanning the search result</td>
<td>10%</td>
<td>24%</td>
<td>34%</td>
<td>32%</td>
</tr>
<tr>
<td>5</td>
<td>I focus on healing method of a disease</td>
<td>5%</td>
<td>13%</td>
<td>34%</td>
<td>32%</td>
</tr>
<tr>
<td>6</td>
<td>I read information about health in social media</td>
<td>5%</td>
<td>8%</td>
<td>50%</td>
<td>37%</td>
</tr>
<tr>
<td>7</td>
<td>I read information about health in the form of short article</td>
<td>8%</td>
<td>18%</td>
<td>48%</td>
<td>26%</td>
</tr>
<tr>
<td>8</td>
<td>I read information about health in the form of research result</td>
<td>0%</td>
<td>11%</td>
<td>55%</td>
<td>34%</td>
</tr>
<tr>
<td>9</td>
<td>I read information about health in the form of other people’s opinion and comments</td>
<td>10%</td>
<td>21%</td>
<td>58%</td>
<td>11%</td>
</tr>
<tr>
<td>10</td>
<td>I read information about health in the form of facts (real story)</td>
<td>8%</td>
<td>18%</td>
<td>34%</td>
<td>40%</td>
</tr>
<tr>
<td>11</td>
<td>I always find the information I need</td>
<td>3%</td>
<td>5%</td>
<td>39%</td>
<td>53%</td>
</tr>
<tr>
<td>12</td>
<td>I know that the information source I need is in the internet</td>
<td>3%</td>
<td>13%</td>
<td>42%</td>
<td>42%</td>
</tr>
<tr>
<td>13</td>
<td>I know where to find information regarding health in social media</td>
<td>8%</td>
<td>10%</td>
<td>50%</td>
<td>32%</td>
</tr>
<tr>
<td>14</td>
<td>I share the information to other people</td>
<td>18%</td>
<td>26%</td>
<td>45%</td>
<td>11%</td>
</tr>
</tbody>
</table>

Ability to evaluate information

In the ability to evaluate information, determining accuracy, relevancy, and comprehensiveness, there are only 47% of housewives who are always assure the information obtained is accurate and came from a verified source. 32% of housewives sometimes do, and 18% rarely do. Regarding the relevancy, there are 47% that rarely assure that the information obtained is suitable for their needs and
42% that often do. Housewives still face difficulties in distinguishing facts, views, and opinions. Only 34% of the respondents could distinguish opinion from facts in health information, 34% respondents that could distinguish information from the ones that aimed for sales to the real one. In identifying inaccurate and misleading information, 58% of housewives do not immediately draw a conclusion after reading an information from the internet, and 66% could select information before sharing it in social media. A more extensive data could be seen from the following table:

Table 8: Ability to evaluate information

<table>
<thead>
<tr>
<th>No</th>
<th>Statement</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I verify that the information I obtained is accurate from a credible source</td>
<td>3%</td>
<td>18%</td>
<td>32%</td>
<td>47%</td>
</tr>
<tr>
<td>2</td>
<td>I always verify that the information I obtained is relevant to my needs</td>
<td>0%</td>
<td>11%</td>
<td>47%</td>
<td>42%</td>
</tr>
<tr>
<td>3</td>
<td>I always verify the information I obtained is complete</td>
<td>0%</td>
<td>5%</td>
<td>37%</td>
<td>58%</td>
</tr>
<tr>
<td>4</td>
<td>I could distinguish between fact and hoax of the information</td>
<td>8%</td>
<td>13%</td>
<td>47%</td>
<td>32%</td>
</tr>
<tr>
<td>5</td>
<td>I could distinguish between opinion and fact of the information</td>
<td>3%</td>
<td>8%</td>
<td>55%</td>
<td>34%</td>
</tr>
<tr>
<td>6</td>
<td>I could distinguish between the information assembled that is aiming for sales and real fact</td>
<td>3%</td>
<td>24%</td>
<td>39%</td>
<td>34%</td>
</tr>
<tr>
<td>7</td>
<td>I could select the information I need</td>
<td>0%</td>
<td>5%</td>
<td>29%</td>
<td>66%</td>
</tr>
<tr>
<td>8</td>
<td>I could identify inaccurate information</td>
<td>13%</td>
<td>13%</td>
<td>40%</td>
<td>34%</td>
</tr>
<tr>
<td>9</td>
<td>I could distinguish misleading information</td>
<td>10%</td>
<td>3%</td>
<td>40%</td>
<td>47%</td>
</tr>
<tr>
<td>10</td>
<td>I don’t draw conclusion immediately after reading health information in the internet</td>
<td>8%</td>
<td>0%</td>
<td>34%</td>
<td>58%</td>
</tr>
<tr>
<td>11</td>
<td>I select information before sharing it in social media</td>
<td>8%</td>
<td>0%</td>
<td>26%</td>
<td>66%</td>
</tr>
</tbody>
</table>

Ability to use information

In the ability to use information, housewives are not yet able to organize information for practical application. This could be seen from the 34% of housewives who use the information obtained from the internet for the family’s health. 40% of the informants keep and share the information regarding health that they deem important. The ability to distinguish facts, views, and opinions of the housewives tends to be low. This could also be seen by the ability to use information in critical thinking and problem solving, and on the ability to generate and communicate information and idea into a suitable format. A more extensive data could be seen from the following table:
Table 9: Ability to use information

<table>
<thead>
<tr>
<th>No</th>
<th>Statement</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I use information regarding health in the internet for family use</td>
<td>3%</td>
<td>21%</td>
<td>42%</td>
<td>34%</td>
</tr>
<tr>
<td>2</td>
<td>I keep and share information regarding health that I deem important</td>
<td>5%</td>
<td>21%</td>
<td>34%</td>
<td>40%</td>
</tr>
<tr>
<td>3</td>
<td>I select health information suitable to daily information</td>
<td>0%</td>
<td>13%</td>
<td>37%</td>
<td>50%</td>
</tr>
<tr>
<td>4</td>
<td>I obtain new information about health when reading article/news in social media</td>
<td>3%</td>
<td>5%</td>
<td>58%</td>
<td>34%</td>
</tr>
<tr>
<td>5</td>
<td>I recommend the information I obtained in the internet to other people</td>
<td>11%</td>
<td>5%</td>
<td>68%</td>
<td>16%</td>
</tr>
<tr>
<td>6</td>
<td>I give comments to health-related information in social media accounts</td>
<td>29%</td>
<td>34%</td>
<td>34%</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>I discuss with other people (such as husband or friend) after reading the health-related information found in social media</td>
<td>3%</td>
<td>13%</td>
<td>45%</td>
<td>39%</td>
</tr>
<tr>
<td>8</td>
<td>I apply the information regarding health from the internet</td>
<td>5%</td>
<td>26%</td>
<td>64%</td>
<td>5%</td>
</tr>
<tr>
<td>9</td>
<td>I use the information to advise other people</td>
<td>5%</td>
<td>26%</td>
<td>61%</td>
<td>8%</td>
</tr>
<tr>
<td>10</td>
<td>I use the information from the internet to be applied at home</td>
<td>16%</td>
<td>13%</td>
<td>60%</td>
<td>11%</td>
</tr>
<tr>
<td>11</td>
<td>I write a new feature based on the health information I’ve read</td>
<td>45%</td>
<td>29%</td>
<td>26%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>I share the information about health to other people/group after reading information on the internet</td>
<td>24%</td>
<td>13%</td>
<td>50%</td>
<td>13%</td>
</tr>
<tr>
<td>13</td>
<td>I have an idea on creating a work based on the health information I read in social media</td>
<td>40%</td>
<td>21%</td>
<td>39%</td>
<td>0%</td>
</tr>
<tr>
<td>14</td>
<td>I follow health experts account on social media after reading information about health in social media</td>
<td>24%</td>
<td>24%</td>
<td>42%</td>
<td>10%</td>
</tr>
<tr>
<td>15</td>
<td>I share information regarding health I’ve read to other people</td>
<td>5%</td>
<td>18%</td>
<td>61%</td>
<td>16%</td>
</tr>
</tbody>
</table>

CONCLUSION
Housewives’ information literacy in Depok City in responding to hoax of health-related information in social media could be seen by using the concept of information literacy promoted by The National Library, the 4i that stands for the ability to recognize, locate, evaluate, and use information. In the ability to recognize information housewives could recognize health-related information needs but do not recognize that the information in social media is accurate and comprehensive as the basic of decision-making. Although, housewives could select health-related information originated from government’s verified health institution. In the ability of information-searching, housewives still experience hardships in finding information suitable for their needs. This shows that housewives are still unable to distinguish hoax in health-related information. In the ability to evaluate information, housewives still have difficulties in distinguishing misleading information. In the ability to use information, housewives are only able to select information based on their daily needs, but not yet on using information in critical thinking, problem solving, and the ability to generate and communicate information and idea into a suitable format.

Based on the data above, 50% respondents are proficient in responding to hoax in health-related information, which means they have the knowledge and practice it. Only 39% categorized as expert, which means they have the knowledge and practice it maximally. This shows that housewives are still unable to distinguished hoax in health-related information, so they are unable to apply said information regarding health.

Table 10: Housewives’ information literacy level in responding to hoax in health information

<table>
<thead>
<tr>
<th>Range</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Information literacy level</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-36</td>
<td>0</td>
<td>0</td>
<td>Novice</td>
</tr>
<tr>
<td>37-73</td>
<td>4</td>
<td>11%</td>
<td>Competent</td>
</tr>
<tr>
<td>74-110</td>
<td>19</td>
<td>50%</td>
<td>Proficient</td>
</tr>
<tr>
<td>111-147</td>
<td>15</td>
<td>39%</td>
<td>Expert</td>
</tr>
</tbody>
</table>

The main obstacle faced by housewives in responding to hoax in health-related information is identifying inaccurate health information and formulating keywords in searching for the information. Moreover, another significant result from the questionnaire is that housewives are not generating and communicating information and idea in a suitable format. Suggestion from the result found in this research is for health-related government institutions to provide information for housewives by using the language and tools that could be easily accessed by housewives. The abundant hoax in health-related information could be minimized if the governmental institutions actively generate information or conduct counseling by using social media focusing on health-related information.

ACKNOWLEDGEMENT

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REFERENCES


Life Transitions, Religiosity and Well-Being of Filipino Emerging Adults in DMMMSU
La Union

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ABSTRACT

In line with the theory of Arnett on emerging adulthood, this study was designed to investigate the characteristics of Filipino emerging adults during this distinct developmental period of their lives with age ranges from 18-27 single undergraduate and graduate students of Don Mariano Marcos Memorial State University in terms of their profile, views with regards to transitions in life as an emerging adult, religious beliefs and practices, and level of well-being. The purpose of the study is to give an account on how Filipino emerging adults value their religious beliefs and practices as part of their worldview and its relation to their well-being in general. A self-report questionnaire was given to the respondents (N=90, \( \bar{x}_{\text{age}} = 21 \)) who were selected through purposive sampling technique. Using a descriptive correlation design for data analysis and the computation from Statistica Software, results indicate that most Filipino emerging adults in DMMMSU belong to 18-20 age bracket, female, live in a rural type of residence with their parents, Catholic, liberal Christian, regular church attenders, with moderate exposure and a high regard for their religious beliefs and practices. All of them somewhat agree on the views of life transitions which include: the age of identity explorations, age of instability, self-focused age, the age of feeling “in between” and the age of experimentation. They have a moderate level of subjective well-being and a high level of psychological well-being. Finally, their level of religiosity is significantly related to their subjective and psychological well-being, respectively.

INTRODUCTION

During the Harvard’s 366th Commencement Exercise, Mark Zuckerberg addressed a challenge to the millennials to create a sense of purpose as a social responsibility because many millennials, in their 20s, are moving back with their parents, delaying marriage, and switching jobs. Becoming an adult is a process that begins in adolescence and continues until they are an adult in their own eyes, and in the eyes of their parents, the law, and the society in which they live. In industrialized countries, most young people are in a significant change from adolescence to adulthood. Scholars have referred to this period (approximately 18 years of age through the middle 20s) as “arrested development” (Côté, 2000), “youth” (Keniston, 1971), and “emerging adulthood” (Arnett, 1998, 2000,2004). This is no longer a brief period of transition into adult roles for most individuals, but an extended period of identity exploration in areas such as work, relationships, and worldviews (Arnett, 2000; Arnett, 2004). They develop a worldview, a set of beliefs and values, by examining the beliefs and values learned in their families in light of the variety of worldviews they are exposed to as young adults. His theory is a period of life course that is culturally constructed, not universal and immutable (Arnett, 2000). He said that it can be considered to exist wherever there is a period of at least several years between the end of adolescence - meaning the attainment of physical and sexual maturity and the completion of secondary-school – and the entry into stable adult roles in love and work (Arnett, 2016). Arnett (2004) proposed five features of emerging adulthood: the age of identity explorations, the age of instability, the self-focused age, the age of feeling in-between, and the age of possibilities. Moreover, Arnett (2016) opined that emerging adulthood is a well established normative life stage in developed countries. But in developing countries like Asia, it is growing slowly because it exists only among the wealthy families – mainly the urban middle class, but will likely to increase as the middle class expands.
Emerging adulthood is characterized by a sharp decline in well-being (Carstensen et al., 2011; Stone et al., 2010). Studies have shown that people have fewer positive emotional experiences during emerging adulthood than during adulthood (Carstensen et al., 2011). Satisfaction with life abruptly declines in emerging adulthood from rates that are not recovered again until older age (Stone et al., 2010). Low levels of positive affect may be the result of an inability to regulate the multitude of emotional experiences that can occur at this age (Carstensen et al., 2011). They are still developing effective emotional regulation skills and can be faced with an attempt of hardships related to accepting responsibility, making major life decisions, and becoming financially independent (Arnett, 2000). Satisfaction with life may also decrease during emerging adulthood because of the risks associated with exploration. Failed career, scholarly, or romantic efforts may lead to discouragement and dissatisfaction with life. Emerging adulthood is a time of development and growth; unfortunately, it seems that these challenges may have harmful consequences for well-being.

However, empirical research shows that religion plays an important role in influencing the well-being. Joshi, et.al. (2008) cited that greater involvement in religion is associated with better physical health, better mental health, and enhanced feelings of subjective well-being across the life course (Ellison, 1994; Koenig, McCullough, & Larson, 2001). With respect to well-being, benefits include life satisfaction (Ellison, 1993), happiness (Poloma & Pendleton, 1990), self-esteem (Krause, 1995), and optimism (Idler & Kasl, 1997). Kimball et.al. (2016) mentioned that there’s a growing interest in emerging adults’ religious and spiritual development (Barry & Abo-Zena, 2014) that goes beyond behavioral practice (e.g., church attendance) and involves a broader developmental model of religious experience. They found Christian emerging adults exhibit a more well-integrated (faith-life engagement), more communally oriented and less personally focused spirituality. Abdel-Khalek (2013) explored the associations of subjective well-being, health, and religiosity among Qatari undergraduates. It was concluded that those who consider themselves as religious in the present study reported higher subjective well-being and good health. Singh (2014) looked into the role of extrinsic and intrinsic religiosity in emotional regulation and well-being among emerging adults in Banaras Hindu University. Results show that there is no clear distinction of extrinsic and intrinsic religiosity found. Respondents with high level of religiosity reported with higher well-being. Likewise, Christian Smith and Patricia Snell (2010) found that religious beliefs are related to higher well-being and lower risk behavior. Culver (2015) investigated the relationship between religious engagement (religious service attendance, praying alone, importance of faith and the sense of closeness to God) and positive mental well-being among emerging adults in US. Results showed those who are more religiously engaged tend to experience favorable well-being. Awad and Masayari (2015) investigated whether subjective well-being and psychological well-being are indistinguishable constructs and scrutinized the relationship between these two constructs with Islamic religiosity. Results indicate that both constructs of well-being are completely different and are not even related. Only psychological well-being has a significant correlation with religiosity. Meanly et.al. (2015), examined the components of religiosity with psychological well-being among emerging religious identified young gay and bisexual men (YGBM). Results show that participation and commitment were negatively associated while spiritual coping was positively associated with their psychological well-being.

Surprisingly, some studies indicate that emerging adults tend to decrease their religious involvement in favor of more individualized forms of religious belief and practice (Arnett & Jensen, 2002) which Arnett (2004) views as part of searching for their identity. Other factors include responsibilities (e.g. work, school), geographic relocation (Hoge et al., 1993), disinterest in affiliation with religious institution, increased doubt of religious beliefs, and increased involvement in other activities (Barry & Nelson, 2008). Uecker et al. (2007) found that decline in religious participation is curbed by marriage but increased by cohabitation, nonmarital sexual activity, drug and alcohol use. Besides, Arnett and Jensen (2015) found in their study that majority among Danish emerging adults’ were nonbelievers and none expressed a traditional Christian faith. Although, there remains a
resilient “cultural religion” as they still held a variety of beliefs in some kind of life after death as they still go through confirmation. However, Bird (2016) found that among emerging adults in Christian college, they experience more of time of exploration and opportunity and not a time of being lost and disconnected. Another study by Cook et.al (2014), understood that intrinsic religiosity quest does not indicate weak religiosity or poor well-being instead they pursue a developmental trajectory where they manage the demands of contemporary culture while maintaining a mature faith.

According to UN World Marriage Data 2015, the average age at which people marry in Germany is 33, in US 28, in Japan 30 while in the Philippines 25.6 years. This is higher compared to the average age at first marriage on 2015 which is 19 years of age (PSA, 2016). Likewise, based on the Labor Force Survey in PSA, women and men aged 20-24 years had the highest labor force participation at 25.9 and 27.6 percent, respectively in 2015.

Thus, given this period of exploration and instability due to transition, it is deemed important to examine factors that are related to emerging adults’ worldview like beliefs because religious culture also matters. This culture of religion shapes the criteria that young adults had achieved full adulthood based on the extent to what they feel (Barry et.al., 2005). Filipino emerging adults are usually characterized as coming from a collectivist cultural background. Triandis (2002) pointed out that people from collectivist cultures tend to define themselves as part of a group and give priority to the objectives of the group. Collectivist cultural background showed a high need for affiliation and people put the needs of the group above personal needs (Triandis, 2002). Thus, it can be theorized that emerging adults in the Philippines may also exist and share the same perception of "feeling in between" like western emerging adults, yet defined in their own culture -- knowing they were pulling clear of the struggles of adolescence and starting to feel responsible for themselves, but still closely tied to their parents and family. Further, their history is influenced by Spanish colonizers for a long period of time, their religious beliefs are still be highly regarded. Lastly, their religiosity might be related to their well-being because it is related to the context of their culture as having close family ties considering the fact that the Philippines is well known as “Christianized country.”

With these foregoing, the researcher was interested to know the general characteristics of Filipino emerging adults in terms of their personal background, their extent of views on these life transitions as well as their predominant religious beliefs and practices. Moreover, the researcher wants to find out their level of religiosity and their level of well-being. This study looked into the relationship between the level of religiosity and well-being among Filipino emerging adults. Specifically, this study is conducted in Don Mariano Marcos Memorial State University, one of the universities in the Northern region of the Philippines.

2. METHODS

2.1 Participants

A self-survey was made on a group of Filipino emerging adults. They are undergraduate and graduate students of DMMMSU. It has three campuses, namely: South La Union Campus, Mid-La Union Campus, and North La Union. Purposive sampling technique was used to select respondents. They are emerging adults that belong between the ages of 18-27 (N=90, Mean age =21). The researcher took 30 participants in each campus with a total of 90 respondents during the months of March- May of 2017, respectively.

2.2 Measures

The researcher made use of adapted questionnaires from the studies of Reifman et al., (2007), Diener et al., (1985), Fetzer (2003) and Ryff and Singer (1988) that were combined together to gather
the data on views of life transitions, religiosity, and well-being of the respondents. The researcher made a pilot study of the 57 items self-report questionnaire on a group of 50 college students in De La Salle University, Manila. An overall cronbach alpha coefficient of 0.821 was computed with specific alpha coefficients per instrument as follows: views of life = 0.811, religiosity = 0.95, subjective well-being = 0.79, and psychological well-being = 0.55, respectively.

2.3 Personal Profile. The respondents’ profile indicates their age, gender, educational status, type of residence (rural, urban, semi-urban), current living arrangements (if they live with their parents or not), religious affiliation (catholic or non-catholic), type of work (if applicable, blue or white collar job) and civil status (single, married, cohabitant). The researcher also asked the respondent’s religious beliefs and practices.

2.4 The IDEA (Inventory of the Dimensions of Emerging Adulthood). The Inventory of the Dimensions of Emerging Adulthood (IDEA) is used to explore individual differences in self-identification with the transition-to-adulthood themes. The 31 item inventory of the IDEA consists of 6 sub-scales, each measured on a 4-point Likert scale (from strongly disagree to strongly agree). Likewise, the researcher also computed a cronbach alpha of 0.811 using Filipino college students from De La Salle University in Manila.

2.5 Religiosity

A 4 item questionnaire adopted from the study of Fetzer (2003), entitled, “Brief Multidimensional Measure of Religiousness/Spirituality.” It is designed to assess religious beliefs, meaning and values. It is scored on a 6-point Likert scale, ranging from 1 (strongly disagree) to 6 (strongly agree). An alpha coefficient was computed using college students in De La Salle University, r= 0.95 respectively.

2.6 Subjective Well-being (SWB).

The researcher administered an adopted scale, the Satisfaction With Life Scale (SWLS) (Diener, Emmons, Larsen, & Griffin, 1985) which is a five-item questionnaire, an established and reliable measure of subjective well being. All items were scored on a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). A sample item reads as follows: “In most ways my life is close to my ideal.” The scores for each item are summed, resulting in a total score range of 5 to 35 and was categorized into three levels: high, moderate and low subjective well-being. The researcher computed an alpha coefficient of 0.79.

2.7 Psychological Well-being (PWB).

The Ryff Scales of Psychological Well-Being RSPWB inventory is an adopted questionnaire from the study of Ryff and Singer (1998) on “The Contours of Positive Human Health.” It is a self-report measure designed to assess PWB. It consists of 18 statements reflecting the six areas of psychological well-being: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. Items consists of self-statements (e.g., “I have the sense that I have developed a lot as a person over time”) where participants rate their agreement using a 7-point scale (1 = disagree strongly, 7 = agree strongly). Items for each subscale is reverse scored and summed so that higher scores were indicative of higher degrees of each subscale. The researcher computed Cronbach alpha of 0.55 using Filipino students respectively.

2.8 Procedure

The researcher asked the consent from the head of the department of the college and through the program coordinator of the graduate studies of each campus to conduct a survey to their students. When approved, questionnaires were distributed among the students in the campus where the researcher belongs. In other campuses, assistance were given of the guidance counselors and a friend.
Before the distribution of questionnaire sheet, the students were given instructions clearly to read and voluntarily signed the informed consent form first before filling up the questionnaire properly. The conduct of this survey took approximately 20 minutes.

Analysis of Data

The study used descriptive statistic to measure the current view of their lives and their prevailing religious beliefs and practices as an emerging adult. Frequency, percentages, and average weighted mean were used to determine the characteristics, views of their life transitions, level of religiosity and well being. The alpha coefficient of the whole questionnaire is r=0.821 respectively. Correlation statistics using Statistica software was used to measure the relationship between level religiosity and well being.

3. RESULTS AND DISCUSSION

3.1 General Characteristics of the Filipino Emerging Adults in DMMMSU

Table 1. Personal Profile of Respondents

<table>
<thead>
<tr>
<th>Items (n=90)</th>
<th>F</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-20</td>
<td>61</td>
<td>68%</td>
</tr>
<tr>
<td>21-23</td>
<td>18</td>
<td>20%</td>
</tr>
<tr>
<td>24-27</td>
<td>11</td>
<td>12%</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>50</td>
<td>56%</td>
</tr>
<tr>
<td>Male</td>
<td>40</td>
<td>44%</td>
</tr>
<tr>
<td>Type of Residence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>66</td>
<td>73%</td>
</tr>
<tr>
<td>Peri-urban</td>
<td>24</td>
<td>27%</td>
</tr>
<tr>
<td>Working</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>72</td>
<td>80%</td>
</tr>
<tr>
<td>Yes</td>
<td>18</td>
<td>20%</td>
</tr>
<tr>
<td>Living Arrangements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Live with Parents</td>
<td>66</td>
<td>73%</td>
</tr>
<tr>
<td>Others (i.e. condo, boarding house etc.)</td>
<td>24</td>
<td>27%</td>
</tr>
<tr>
<td>Boarding House</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Dormitory</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>House of other relatives</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Religious Affiliation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Religious Belief and Practice

<table>
<thead>
<tr>
<th>Religious Belief</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catholic</td>
<td>81%</td>
</tr>
<tr>
<td>Non-Catholic</td>
<td>19%</td>
</tr>
</tbody>
</table>

**Moderate Exposure**

<table>
<thead>
<tr>
<th>Degree of Exposure to Religious Beliefs</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liberal Christian</td>
<td>49%</td>
</tr>
<tr>
<td>Conservative Christian</td>
<td>35%</td>
</tr>
<tr>
<td>Deist</td>
<td>9%</td>
</tr>
<tr>
<td>Agnostic/Atheist</td>
<td>7%</td>
</tr>
</tbody>
</table>

Degree of Exposure to Religious Beliefs

<table>
<thead>
<tr>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>50%</td>
</tr>
</tbody>
</table>

Importance of Religious Beliefs

<table>
<thead>
<tr>
<th>Importance of Religious Beliefs</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very important</td>
<td>77%</td>
</tr>
<tr>
<td>Quite important</td>
<td>18%</td>
</tr>
<tr>
<td>Somewhat important</td>
<td>4%</td>
</tr>
<tr>
<td>Not at all</td>
<td>1%</td>
</tr>
</tbody>
</table>

Church Attendance

<table>
<thead>
<tr>
<th>Church Attendance</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regularly (about 3 to 4 times a month)</td>
<td>52%</td>
</tr>
<tr>
<td>Oftentimes (about 1 to 2 times a month)</td>
<td>31%</td>
</tr>
<tr>
<td>Sometimes (once every few months)</td>
<td>12%</td>
</tr>
<tr>
<td>Seldom (about 1 to 2 times a year)</td>
<td>5%</td>
</tr>
<tr>
<td>Never</td>
<td>-</td>
</tr>
</tbody>
</table>

It can be gleaned from the table that these Filipino emerging adults imply that all of them are focused in their lives as single individuals. Their characteristics reflect the Filipino values of interrelatedness because majority of them are still living with their parents even if they are beyond the legal age of 18. Levinson’s theory proves that during the early adult transition period, they cannot leave home yet due to financial incapability. Thus, it implies that they are dependent to their parents in terms of their basic needs. These Filipino emerging adults still value their religious beliefs because most of them regularly attends church activities, and believe that these religious beliefs are still very important though most of them are moderately exposed to their beliefs. Moderate exposure, as defined in the questionnaire means that parents made some effort to take children to church and expose them to religious ideas but not on a regular basis; and/or parents did not attend themselves; and/or religion did not seem very important to parents (Arnett & Jensen, 2002). It implies that their religious faith is an expression of their norm. Those that are non-Catholics are still Christians belonging to different religious sects. Religion for them is part of their daily lives and they see this as a part of their Filipino identity. Most are Liberal Christians which means they describe themselves as Christians (or as adherent of particular denomination, e.g., Iglesia ni Cristo, Jehovah’s Witnesses, Catholic, Born
Again, etc). However, a person may express skepticism about the institution of the church and/or about some aspects of Christian dogma, such as the idea that Christianity is the only true faith. A person may express favorable or at least tolerant view of other (non-Christian) faith (Arnett, 2002). This speaks of emerging adults’ open-mindedness in terms of the different religious sects in the area even if most of them are Roman Catholics. However, there are six percent of them who belong to agnostic/atheist category which means that they have made their own decision to have this kind of religious belief.

3.2 Views of Life Transitions of the Filipino Emerging Adults

Table 2. Views/Dimensions of Life transitions (N=90)

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>AWM</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identity Explorations</td>
<td>3.15</td>
<td>Highly “me”</td>
</tr>
<tr>
<td>Experimentation/Possibilities</td>
<td>3.13</td>
<td>Highly “me”</td>
</tr>
<tr>
<td>Feeling “in-between”</td>
<td>3.09</td>
<td>Highly “me”</td>
</tr>
<tr>
<td>Self-focused</td>
<td>3.03</td>
<td>Highly “me”</td>
</tr>
<tr>
<td>Other-focused</td>
<td>2.89</td>
<td>Highly “me”</td>
</tr>
<tr>
<td>Negativity/Instability</td>
<td>2.84</td>
<td>Highly “me”</td>
</tr>
</tbody>
</table>

The extent of how the Filipino emerging adults view life transitions is considered as highly “me” with identity explorations as the highest in average weighted mean (3.15). This means that these emerging adults somewhat agree that their life stage is characterized by exploring their identity. They view their lives from a social age (clock) where their roles and expectations are in a time of: finding out who they really are, defining themselves, planning for their future, seeking a sense of meaning, and deciding on their own beliefs and values. Thus, this corroborates Arnett’s (2000) and Bird’s (2016) studies that they are characterized by an extended period of identity explorations and opportunities without commitment. They look on it as a positive view of one’s developmental stage. Arnett says that emerging adulthood is the age of identity explorations because the psychosocial moratorium Erikson (1968) described is now normative and takes place in emerging adulthood (Reifman et al., 2007).

Moreover, respondents slightly agree in looking at themselves as having this time of experimentation/possibilities with an average weighted mean of 3.13 interpreted as “highly me.” This period focuses on open choices, possibilities, experimentation and a time of trying out new things in life. They perceived to have an optimistic time of life, as a variety of potential mates, job opportunities, social causes, and other commitments as being available (Reifman et al., 2007).

The table posits that these Filipino emerging adults, more or less, agree in the dimension of feeling “in between” with an average weighted mean of 3.09. They believe that this is a time where they feel like they are adults in some ways but not in other ways, gradually becoming an adult and not sure whether they have reached full adulthood. In many traditional cultures, the normative transition to adulthood is signaled by a rite of passage, being settled in one’s career, marriage, or the arrival of one’s own first child while in a more modernized culture, they prioritized the more objective markers of financial independence and living separately from one’s parents as well as subjective tasks (Lane, 2014). In the study of Sharon (2015), however, showed that the most important markers for adulthood were those over which young adults have more control: relational maturity (e.g., establishing an equal relationship with parents and developing greater consideration for others).
Furthermore, they somewhat agree on the idea that this period of their life is characterized by being “self-focused” with an AWM of 3.03. This period implies that they perceive this time as having their personal freedom, being responsible for oneself, optimistic, independent and self-sufficient. Just like the study of Arnett (1994), college students think that responsibility for one’s actions and independence matter more than how old they are, whether they are married, have a child or own a house. Among Filipinos, self-focused may be interpreted in its own cultural context that even if they are still dependent to their parents, they believe that they are already in the stage where they are starting to exercise responsibility for their own decisions in life.

They fairly agree that their transition is seen as “other-focused” with an AWM of 2.89, interpreted as “highly me.” This implies that they are starting to consider the period of settling down, having responsibility toward others and having commitment to others. It can be seen from the study that all of them are still single although it is possible that they are into certain relationships with the opposite sex, or having the responsibility of helping their families financially because some of the respondents are already working while studying at the same time.

Lastly, they slightly agree that it is a period of negativity/instability with an average weighted mean of 2.84. This means that they accept being in a time of confusion, feeling restricted, feeling stressed out, instability, highly pressured, unpredictability and many worries. This kind of feeling lumps that Filipino emerging adults’ being normal, healthy people with an “adolescent” brain and undergoing the process of fluctuating emotions due to stress and pressure which make them sensitive to issues that brings uncertainty to their lives. This transition from childhood to adolescence shows an increase in the experience of negative emotions and may fluctuate more frequently, become more intense, and more subject to extremes than those experienced by children and adults.

The result implies that emerging adulthood is established as normative life stage not only in western countries, but also in countries like Philippines. It can be seen that emerging adults view themselves similarly with westerners, especially the age of “identity explorations” because of career explorations and indirectly finding meaning for themselves.

### 3.3 Level of Religiosity of the Filipino Emerging Adults

<table>
<thead>
<tr>
<th>Level of Religiosity</th>
<th>f</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>75</td>
<td>83 %</td>
</tr>
<tr>
<td>Moderate</td>
<td>12</td>
<td>14 %</td>
</tr>
<tr>
<td>Low</td>
<td>3</td>
<td>3 %</td>
</tr>
</tbody>
</table>

Table 3 reveals that most Filipino emerging adults have high level of religiosity with a percentage of 83. It implies that they are highly religious in terms of practicing their religious beliefs. They believe in a God who watches them and finds strength and comfort in the religion where they belong. Their lives unfold according to the will and plan of God and carry their religious beliefs in all dealings in their lives. These characteristics reflect that Filipino emerging adults place a high value on a sovereign God over their lives. It implies that the religiosity of these respondents can be traced from the history of the Filipinos that Catholicism or Christianity is popular in the country and that it has been handed down from generation to generation. This result differs with Arnett and Jensen’s (2002) study among American emerging adults who are highly individualized and are often skeptical of religious institutions.

### 3.4 Level of Well Being of Filipino Emerging Adults

<table>
<thead>
<tr>
<th>Well Being</th>
<th>f</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjective Well-Being</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>43</td>
<td>48 %</td>
</tr>
</tbody>
</table>

995
3.4.1 Subjective Well Being

Generally, the subjective well being of these Filipino emerging adults is moderate (48%). Being normal, they are contented with what is happening with their lives. This is quite normal for them as they are still students trying to reach their goals or ambitions in life. According to Deiner et al. (1999), it reflects a sense of one’s life. One would not change much if one’s life could be lived over again. This result is in contrast with Carstensen’s et al., (2011) study that emerging adulthood is characterized by a sharp decline in well-being. It implies that Filipino emerging adults are more carefree and happier than emerging adults from western countries. It could be attributed on the expectations in one’s culture. Western cultures may put more pressure on their emerging adults such as being independent at an earlier age and that they must be able to attain certain goals in that period but if this is not achieved, then it will affect their well being. As Joshi et al., (2008) mentioned that greater involvement in religious beliefs is associated with enhance feelings of subjective well-being across life course. The high level of religiosity of these Filipino emerging adults helps them to have a moderate subjective well-being.

3.4.2 Psychological Well Being

Generally, all the domains of psychological well-being of the respondents is high (68%) while some are moderate (22%) and a small portion is low (2%).

Positive Relations with Others

Most Filipino emerging adults have high positive relation with others (86%) which implies that they are generally have a warm, satisfying, trusting relationships with others; is concerned about the welfare of others; capable of strong empathy, affection, and intimacy; understands give and take of human relationships.

Self-acceptance
Table 4 posits that in terms of self acceptance, most Filipino emerging adults in DMMMSU possess a positive attitude toward the self (91%) ; acknowledges and accepts multiple aspects of self, including good and bad qualities; feels positive about past life.

**Autonomy**

These emerging adults have high level of autonomy (92%), meaning, having self-determination and independence; able to resist social pressures to think and act in certain ways; regulates behavior from within; evaluates self by personal standards. It implies that even if they live with their families, the process of becoming independent is a part of developing their sense of self and/or identity.

**Personal Growth**

They have a high level of personal growth (81%) which means that they have a feeling of continued development. They see themselves as growing and expanding because they are open to new experiences and have a sense of realization over their potentials. They also see improvement in self and behavior over time and are changing in ways that reflect more self-knowledge and effectiveness.

**Environmental Mastery**

They have a high level of mastery (90%) which implies that they have a sense of mastery and competence in managing the environment. They can control complex array of external activities and make effective use of surrounding opportunities. Likewise, they are able to choose or create contexts suitable to personal needs and values.

**Purpose in Life**

Lastly, in terms of purpose in life, they have a high level of it (69%) which means that they have goals in life and a sense of directedness. They feel that there is meaning to present and past life and hold beliefs that give life purpose. They have aims and objectives for living.

### 3.5 Relationships Between Level of Religiosity and Well-Being

Table 5 presents the correlation between religiosity and subjective well-being. At $\alpha= 5\%$, p-value $=0.00939< \alpha = 0.05$, one rejects the null hypothesis. Therefore, there is a significant positive relationship between religiosity and subjective well-being. However, since it is only $r= 0.272$ , this signifies weak relationship. This means that these emerging adults are more inclined with their religious beliefs and their perceived life satisfaction as a whole. They are active and regularly attend church service and this is associated with having satisfaction in their lives.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. D</th>
<th>$r$ (X,Y)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religiosity</td>
<td>19.89</td>
<td>4.417</td>
<td>0.272</td>
<td>0.00939</td>
</tr>
<tr>
<td>Subjective Well Being</td>
<td>22.77</td>
<td>6.337</td>
<td>0.272</td>
<td>0.00939</td>
</tr>
<tr>
<td>PWB Personal Relations</td>
<td>15.49</td>
<td>3.730</td>
<td>0.272</td>
<td>0.00939</td>
</tr>
<tr>
<td>Religiosity</td>
<td>19.89</td>
<td>4.417</td>
<td>0.307</td>
<td>0.00320</td>
</tr>
<tr>
<td>PWB Self-acceptance</td>
<td>14.99</td>
<td>2.869</td>
<td>0.307</td>
<td>0.00320</td>
</tr>
<tr>
<td>Religiosity</td>
<td>19.89</td>
<td>4.417</td>
<td>0.367</td>
<td>0.00037</td>
</tr>
<tr>
<td>PWB Autonomy</td>
<td>14.99</td>
<td>2.97</td>
<td>0.307</td>
<td>0.00037</td>
</tr>
<tr>
<td>Religiosity</td>
<td>19.89</td>
<td>4.41</td>
<td>0.320</td>
<td>0.00209</td>
</tr>
<tr>
<td>PWB Personal Growth</td>
<td>14.13</td>
<td>3.93</td>
<td>0.231</td>
<td>0.028629</td>
</tr>
<tr>
<td>Religiosity</td>
<td>19.89</td>
<td>4.42</td>
<td>0.231</td>
<td>0.028629</td>
</tr>
<tr>
<td>PWB Envi'tl Mastery</td>
<td>14.36</td>
<td>2.977</td>
<td>0.349</td>
<td>0.000746</td>
</tr>
<tr>
<td>Religiosity</td>
<td>19.89</td>
<td>4.418</td>
<td>0.310</td>
<td>0.00290</td>
</tr>
<tr>
<td>PWB Purpose in Life</td>
<td>12.83</td>
<td>3.435</td>
<td>0.310</td>
<td>0.00290</td>
</tr>
<tr>
<td>Religiosity</td>
<td>19.89</td>
<td>4.418</td>
<td>0.310</td>
<td>0.00290</td>
</tr>
</tbody>
</table>

N = 90

Marked correlations are significant at $p<.05000$ (two-tailed)

Table 5 presents the correlation between religiosity and subjective well-being. At $\alpha= 5\%$, p-value $=0.00939< \alpha = 0.05$, one rejects the null hypothesis. Therefore, there is a significant positive relationship between religiosity and subjective well-being. However, since it is only $r= 0.272$ , this signifies weak relationship. This means that these emerging adults are more inclined with their religious beliefs and their perceived life satisfaction as a whole. They are active and regularly attend church service and this is associated with having satisfaction in their lives.
Generally, the psychological well-being of Filipino emerging adults has a significant weak relationship with their level of religiosity. It conforms a little with the study of Abdel-Khalek (2013) that those who consider themselves as religious in the present study reported higher subjective well-being. In terms of personal relationships with others, at $\alpha=5\%$, $p$-value $=0.00320 < \alpha = 0.05$, $r = .307$, one rejects the null hypothesis. Therefore, there is a significant weak relationship between religiosity and their personal relations. It implies that being more religious is a better way to socialize with others. In self-acceptance, at $\alpha=5\%$, $p$-value $=0.00037< \alpha = 0.05$, $r = 0.367$, one rejects the null hypothesis, therefore, there is a significant weak relationship between the way they look and know themselves and their level of religiosity. The more that they are religious, the better is their sense of self or their conceptualization and their repertoire of seeing themselves as a person. In autonomy, at $\alpha=5\%$, $p$-value $=0.00209 < \alpha = 0.05$, $r=0.320$, one rejects the null hypothesis. Therefore, there is a significant weak relationship between religiosity and their personal relations. It implies that being more religious is a better way to socialize with others. In personal growth, at $\alpha=5\%$, $p$-value $=0.00209 < \alpha = 0.05$, $r=0.231$, one rejects the null hypothesis. Therefore, there is a significant weak relationship between personal growth and religiosity. Again, the more religious they are, the more that they are able to achieve personal growth. It implies that their religious beliefs and practices is an avenue for them to keep on growing as an individual person. It gives them the knowledge and wisdom on how they enrich their potentials. In environmental mastery, at $\alpha=5\%$, $p$-value $=0.00074< \alpha = 0.05$, $r=0.349$, one rejects the null hypothesis. Therefore, there is a significant weak relationship between their religiosity and mastery. It implies that the knowledge they get from their religious beliefs and practices help them to manage the challenges of their environment. Lastly, in purpose in life area, at $\alpha=5\%$, $p$-value $=0.00290 < \alpha = 0.05$, $r=0.310$, one rejects the null hypothesis. Therefore, there is a significant weak relationship between their religiosity and purpose in life. It means that the more religious they are, the better is their view of their goals and having a sense of meaning in their lives. Thus, religiosity is never a hindrance for them to achieve a high sense of psychological well being.

The study has limitations. The sample is limited only to Filipino emerging adults who are currently studying in one university in the province a rural and semi-rural area. Generalization of the findings to other groups or individuals in the Philippines might be considered as small. The scope of the research is focused only on self-reports assessment, thus, personal bias may come in since students may respond in ways that are socially desirable rather than reveal their actual response to each statement. Future studies should use more participants to have a better generalization of the characteristics of Filipino emerging adults.

4. CONCLUSION

The present study provides evidence of the features of emerging adulthood, their religious beliefs and practices. Like the previous studies, this study found that Filipino emerging adults in the province perceived different views of life transitions, especially in identity explorations. Filipino merging adults are highly religious because most of them attend church services regularly. They consider their beliefs as very important in their lives. However, they may call themselves “Christian” even though their beliefs is more of a liberal Christian and that most of them believe that they are moderately exposed to these beliefs. They also perceived to have moderate subjective well-being but have a high level of psychological well-being. However, correlation shows that their level of religiosity has significant weak relationship to their well-being. Having limitations on the sample size of respondents aged 18-27, it suggests that it may prove fruitful to investigate further the possibility of age and cohort differences regarding religious beliefs, in other universities and regions as well. Qualitative studies may also be an important complement to quantitative survey research because it may reveal the essence and meaning of their responses to survey questions. This may also help to illuminate people’s religious and well-being worldviews. Likewise, it may also be good to add other
variables that would describe emerging adults like non-college/university students, personality, attachment, emotional experiences and many others.

5. ACKNOWLEDGEMENT

I would like to thank all the students of DMMMSU for their participation in the survey. I am also grateful to my mentors, Dr. Roberto Javier Jr. and Dr. Madelene Sta. Maria for giving me their support and feedbacks in this topic. I would like to thank my fellow doctoral students and friends, Ms. Ailyn Sabdilon, Ms. Aisha Sevillejah, and Ms. Daisy Ann Disu for their encouragement, comments and friendship. I am also grateful to my husband, Rolando Milan for all the love and to my siblings who have helped me in many ways. Lastly, I give all the glory and honor to God alone, the One who made us all.

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Chapter 5 Issues in Emerging Adulthood

https://www.mheducation.ca/web_resources/sch/Chapter_5_final.pdf


The Creation of the Asian Coral Triangle Region: Learning from Indonesia’s Harmonization of International and National Interests

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ABSTRACT

The Coral Triangle region is a unique region that has one of the highest biodiversity in the world. This region supports crucial marine species and ecosystem. Indonesia is a part of this coral region. In supporting the Coral Triangle Initiative on Coral Reefs, Fisheries, and Food Security (CTI-CFF) world program, Indonesia plans to establish 20 million hectares of marine conservation by 2020. Indonesia’s initiative to develop these protected marine areas requires new national regulations and policies. It is important to analyze the efforts to balance Indonesia’s responsibility to protect marine areas and national interests such as local wisdom, traditional fisheries and navigation which have existed before. Indonesian law on marine conservation is made up of a collection of provincial laws and policies, which then became national marine conservation program. The result of this study shows that Indonesia could harmonize both international and national interests. Regionally, this program can be applied to the Asian marine conservation program. On a larger scale, every state can harmonize their interest between marine conservation spirit and sustainable development. The Asian region can be a large conservation area in accordance with the designation, functions and different responsibilities of each state.

Introduction

The Coral Triangle area is a unique waters area and diversely rich of marine biodiversity. As a complex ecosystem, such region is the heart of coral reefs that stretches only 1.6% of the total ocean. The Coral Triangle region is home for "the highest coral diversity" in the world with 600 corals or 76% of the world's known coral species, and also includes 37% of the world's reef fish species concentrated in the area hence the area is also familiarly known as the “Amazon of the Seas” (CTI Initiative, 2016; see also Burke, at.al, 2012: vi-7).

Coral Triangle region is stretched out along the Southeast Asia region and the world has recognized it as the global center of marine biological diversity (Bowen at.al., 2013:360). In Manado 2009, these six countries have signed and agreed to a regional plan of action called the Coral Triangle Initiative, a collaboration that aims to protect this highly important area, and each has developed national plans of action that are aligned with the regional plan. Those six countries include Indonesia, Malaysia, the Philippines, Papua New Guine, Timor-Leste and the Solomon Islands also popularly known as “the CT6”. The area of the coral triangle covers not only national level but also includes the exclusive economic zones (AAZs) from 6 Member States and the sea covers an area in Brunei Darussalam and Singapore state that is not a member of the CTI itself (Burke, at. Al, 2012: 7-8).

Post-signing of CTI-FF region, thus such obvious case will legally bear legal responsibility for every state member of the CTI-FF. In other words, the responsibility of protecting and preserving the environment and marine ecosystems were born based on the agreement and the signing of the Declaration of The coral Triangle Region on the 15th of May 2009 in Manado, Indonesia. As one of the members of the CTI-FF, Indonesia shall be obliged to establish its some areas as conservation areas, and in turn, Indonesia will establish a 20 million-acre conservation area waters up to 2020 (WWF Indonesia, 2017; see also KKP, 2017).

In recent years, Indonesia has just started to gradually set water conservation areas. In fact, long before the participation of Indonesia in the CTI-FF, there have been various notable interests within Indonesia sea areas, both national and International interests. Under the national level, there is
a central government in terms of the equalization of regulation and policy to the interests of the whole people of Indonesia as well as the interest of 33 provinces which is absolutely different in protecting its territory. Under the external point of view, there are interests of the international world that demands Indonesia to safeguard biological diversity including corals and fishery resources. Moreover, nowadays, based on the research findings, Indonesian territorial waters is also a crossing territory of highly migratory species such as whales and dolphins (Mustika at.al, 2009 : p. 200). Other international interests in Indonesian territorial waters is the significance of waterways in sea islands of Indonesia. These interests requires the government of Indonesia to stick with it (LOSC, 1982 : art. 53).

The success of Indonesia in harmonizing the interest in national and international level is worth to be addressed as the figure for the establishment of regional conservation area in Asia. For the protection of the marine environment is one of the integral area as one ecosystem unity. Such phenomenon could not be conducted by one country alone, however all countries should do this.

**Methodology**

The recent study is conducted using library research through juridical normative approach. This project learns various rules of existing legislation as well as it is supported by findings of research on the marine researches as a basis for the establishment of the protection policy and the determination of conservation areas. Through the multidisciplinary approach to science, the Indonesian government's policy can be referred as a tool for designing the policy in harmonizing the interests towards the sea areas with the obligation to establish conservation areas waters in International scale.

**Discussion**

Fundamentally, Marine Protected Area (MPA) covers a variety of rules about the conservation of biodiversity and ecosystem services associated with its accomplishments (IUCN, 2017 : 6). According to The International Union for Conservation of Nature (IUCN), Marine Protected Area (MPA) is:

“geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values”

Basically, MPA is a tool and therefore it is not an end goal in the protection of the marine environment. MPA designation is crucially important thing for the protection of marine biodiversity and the sustainability of fishery resources. Through MPA, this will enable the people to obtain a global guarantee in ensuring the fishery resources from the control management that has ever been failed in the past management. The combination of integrated management between the physical condition of the sea and with species living at sea is part of MPA method in supporting the health of marine ecosystems (Laffoley, D. d’A., (ed), 2008: 7).

The Indonesian government strongly supports the UN and international environmental law program at sea, especially concerning the establishment of MPA, due to Indonesia’s geographical condition as an archipelagic country. But in fact, long before the United Nations declared the importance of protecting the marine environment, Indonesian traditional societies have enforced their customary laws in their respective regions. The examples of the concept of protection of the traditional marine environment and still apply today such as awig-awig in Lombok, Sasi in Maluku (Edi Setiyono, 2016, p. 8), Panglima Laot di Aceh (Sri Walni Rahayu, 2014, p.454-456) etc.

Today's modern era, studies, findings and rules on marine environmental protection have been supported by scientific evidence. This scientific evidence finally finds a pristine area of marine ecosystems up to the marine environment that must be healed, areas that should not be utilized until areas that can be exploited, from areas rich in biodiversity to areas rich in minerals and crude oil.

The current condition of the Indonesian sea is not only the right of Indonesia, but also Indonesia's responsibility to the international world. Indonesia is responsible for safeguarding the marine environment by establishing a conservation area in accordance with SDG's number 14, which
requires each country to provide 10% of its total ocean area to MPA. While regionally, Indonesia also has responsibility towards CTI-CFF which is a new institution consisting of 6 countries in Coral Triangle Region.

The problem here is internally that Indonesia is also interested in promoting and prospering its people through the management of water areas, whether for fishing, shipping, mineral and petroleum mining, etc. Not to mention, in some areas there is still customary law that still regulates the protection of the marine environment traditionally to the protection of the marine environment based on the government's determination or due to international demands such as Raja Ampat and Savu Sea.

This is where the heavy burden of the Indonesian government. The government is among the interests of traditional society, the interests of the state itself to manage the marine resources for the welfare of its population up to the international responsibility carried by the Indonesian government in protecting the marine environment through the establishment of the MPA. Even at the same time, Indonesia is also demanded by the international world to ensure international shipping in the archipelagic sea lanes. So to form MPA, required a wisdom by the government of Indonesia to accommodate these various interests. Especially now Indonesia is the pioneer of the formation of regional CTI-CFF so that there is legal responsibility and moral responsibility to the international world.

a. How Does Indonesia Determine MPAs?

The initial stages of MPA determination starts from planning. Such planning is previously started through several stages, such as identification, inventory, and the backup until it is finally decided to be conservation area waters, coasts and small islands (KKP3K). The determination of conservation areas in Indonesia is started from the regional planning to the national planning (bottom-up). Based on the regulation of the Minister of marine and fisheries number PER 02/MEN/2009 on the procedures for the determination of water conservation areas, the determination of water conservation areas in Indonesia is not only in terms of guarantee the preservation of fishery resources and sustainable ecosystems but also participate and preserving local wisdom that has basically been there since long time ago before the concept of environmental protection is known academically. Thereforer, the final objective of such conservation areas’ determination will significantly improve the welfare of communities surrounding them (Ministerial Decree of Indonesia’s Marine and Fisheries, 2009 : art. 2).

In order to prevent the technical issues and to appreciate the wisdom of existing local (every province in Indonesia has a number of local wisdoms), the government of Indonesia attempts to gain the candidates of water conservation areas through bottom up method that is through waiting for initiative proposals that might be submitted either by individuals, community groups, education institutions, research institutions, government agencies or group of non-governmental organizations (Ministerial Decree of Indonesia’s Marine and Fisheries, 2009 : art. 9)

The proposals from bottom will be continued to the higher level, it can be either to the Regent or Mayor, or even to the Governor or to the ministerial level. Those officials which later on will conduct the assessment of the proposed conservation areas based on the authorities that they own (Ministerial Decree of Indonesia’s Marine and Fisheries, 2009: art. 11). The identification and inventory of the water conservation areas’ candidates will be conducted through survey and potential assessment, socialization, public consultation, and coordination with relevant agencies (Ministerial Decree of Indonesia’s Marine and Fisheries, 2009 : art. 13-19).

Once all of the requirements have been completed, the further step is the determination of the region as its backup. The backup area can be set up by the Mayor or Governor or directly by the Minister of marine and fisheries. The backup conservation areas will later on receive the designation as conservation areas by the authorized minister in this regard it is the duty of the Minister of marine and fisheries (Ministerial Decree of Indonesia’s Marine and Fisheries, 2009: art. 21). After such determination, the announcement and the socialization of conservation areas will be introduced to
communities and government apparatus in regional areas to do the setup limits (Ministerial Decree of Indonesia’s Marine and Fisheries, 2009: art. 23).

This kind of bottom up method is very attentive to the interests of local communities and the current regional conditions that are indeed worthy to be a conservation area. The role of the people within communities, academia, local authorities and individuals who care about the environment can be accommodated. Therefore, the area that is not affordable and is not recognized by the central government can be protected through the proposals submitted by using the bottom up method.

b. How Does Indonesia Harmonize the National and International Interests?

So far, Indonesia has had 165 conservation areas, with the total number of the whole conservation areas have reached 17,980,651.99 hectares. Among the vastness of such conservation areas, there are certainly some areas that will be adjacent or close with international shipping interests. The protection of the water territory has been set out in Chapter XII LOSC in 1982, where each country should safeguard the marine environment. But this condition will be overlapping when it is confronted to the rights of other cross countries at the sea islands regulated in article 53 LOSC in 1982.

There is a strategic policy in which its decision is determined by the central government. Especially the issue with regard to the international world. In this case, it deals with international interests to the shipping line. International cruise lines have existed in prior and have also got a mutual agreement between Indonesia and user States. Where, for the sake of running the responsibility cited in article 53 LOSC in 1982, the government of Indonesia makes internal policies that conservation areas should not close and block the right of archipelagic sea lanes passage, as one form of Indonesia responsibility to the international world.

And therefore, for the conservation area that its territory turned out to be overlapping with the proposed conservation lanes then the considerable decision will be taken through cross-ministerial coordination. For instance, in the designation of Laut Sawu conservation area, when the proposal regardless to the determination of Laut Sawu as a conservation area, the related ministry shall participate in and provide considerable view from the perspective of international law, in this case it is the international law of the sea.

(See: Picture 1. Map of National Waters Park in Laut Sawu)

Source : Ministerial Decree of Indonesia’s Marine and Fisheries, number 6/2014

Hence, in 2014, Laut Sawu was designated as a waters conservation area. The designation of Laut Sawu as a conservation area may not necessarily be covering the archipelagic sea lanes, but rather by means of revealing the coordinate of archipelagic sea lanes from the conservation area.

c. Asian Can Be One of MPA Regions

1. CTI-FF Region

The Indonesian government not only establishes conservation areas in its territorial sea territory but also spearheads MPA formation regionally through the CTI-FF region. The area of the sea that is in the tropical region and is the crossing and meeting of the Indian Ocean, Pacific and South China Sea has made the coral triangle area as a region rich in natural resources. Regionally,
Indonesia has pioneered the formation of CTI-FF on the basis that the protection of marine ecosystems through MPA formation can not only be individualized by country alone, but must be collectively, since marine ecosystems are an interdependent and dependent. (E. Eriksen, 2017, p. 2-3).

Recently, there has been only six States that make an agreement about CTI-FF, while Singapore and Brunei Darussalam have not become the members yet. On the other hand, if seeking the coverage of the regions of coral triangle world, those two States also comprise the territorial sea areas and their own jurisdiction. The current members of the CTI-FF are still based on the awareness of Member States, yet it is none which attempts to share integrated ideas into a sole policy in the form of conservation agreements in regional Asian and its surrounding. But in fact, the Asian region is tropical region in which it is rich in biodiversity. If the Coral Triangle region is the inner area of biodiversity, then its surrounding areas can be stated as supporter areas. Based on the model designed by Bowen, he explained that the area around the coral triangle is the area of deployment and a buffer coral triangle area (Bowen, at.al., 2013:360).

Thus, when taking an example to Indonesia, the CTI-FF as the core region might not be able to stand on its own without any support from the surrounding area. Here each Member State shall explains mutually about the privileges and the uniqueness of their MPA, then both strengths are mapped and combined so that it becomes one blue-print of the regional conservation core area. Considering the area of CTI-FF is a core area of marine environmental protection, then supporting areas are highly necessary through the cooperation among the States which are located and surrounded the CTI-FF area. This means that the cooperation of every nation around CTI-FF territory is needed to participate in support of the core areas of biodiversity.

The way is that each State around such core areas (CTI-FF) shall start to create planning and determine their own conservation area and the consolidation of all the planning in this supporter zone shall be combined with the planning in core area. The merger of the core zone and the backup zone will form a regional (Asian) CTI-FF zone. In this case, the planning area covers not only the marine sanctuary in the State’s territory but also covers an area outside its jurisdiction (Scovazzy, 2016:188-189).

2. South China Sea as MPA

Marine conservation area shall not be carried out only by one State or few States only, but it must be supported by all countries under one policy and the spirit of sustainability. The marine is one of the ecosystems thus its sanctuary and its planning should also be in one global policy. Essentially, each marine area in each country shall have its own function but in a mutual relationship to each other. For example if the marine area in one’s State is where a species of fish is rapidly proliferating, then there shall be other countries that its marine area will become a place of foraging or crossing such species once they have been growing up. Thus, it needed an integration and cooperation among all countries of the Asian regions in the planning conservation area globally.

If a CTI-FF member country has been able to establish a conservation area by combining and harmonizing the MPA and the benefit of each country then ideally the Asian region can also more widely establish the South China Sea as the MPA Asia region. This may be possible, given that some large MPA areas have been conducted for kutup area (Timo Koivurova, 2009) so it is not impossible to make the South China Sea an area of MPA. Determination of South China Sea as MPA does not mean to close all activities and activities there, but South China Sea MPA outline needs to be established in order to maintain the stability of ecosystem, determine the area of protection and utilization by means of zoning and harmonize the concept of sea protection which is the priority of every country around it.

The establishment of the South China Sea MPA area will be a comprehensive integrated management considering that between the South China Sea and the territorial sea of each country is an integrated unity. With the establishment of South China Sea MPA there will be 1 MPA integration between the surrounding territorial territory and the South China Sea. So the protection of the marine environment will be better. The determination of the South China Sea MPA also does not mean
stopping the activities of shipping, communications, laying of submarine cables and others. However, the establishment of South China Sea MPA area will precisely create the neatness of South China Sea governance between zoning protection with exploitation, state responsibility zone in territorial with joint responsibility in South China Sea and between international and national marine protection obligations.

The steps that can be done is:

a. Proposed and Initiative
Learning from Indonesia who started the MPA proposal from the lowest level of community proposals, experts, NGOs etc, then for South China Sea MPA basically already have data of initial proposal that is MPA data from every countries around the south china sea. So by collecting MPA data of each country it will be able to prevent inter-state conflicts of interest or disruption of the sovereignty of a country at sea. A slightly different but similar condition is about the proposed setting for the southern Chinese sea region. The proposed MPA region of southern China as a common heritage mainkind must be proposed by and based on the results of research of marine and fisheries experts, NGOs, marine biologists and other scientific institutions that understand the marine and marine ecosystems of southern China.

b. Determination
The designation policy referred to here is for the determination of the MPA in the South China Sea itself (excluding the jurisdiction of each country such as ZEE). This stipulation policy must be based on scientific research results and supported by the latest and strongest data. Base on data, it will be able to find and see which areas should receive attention to be defined as the core zone, zone of use and other zones.
The determination should also take into account international and international customary law provisions that have been applicable in the South China Sea since long such as shipping, fishing, cable and pipe etc.
For this determination also requires a common consensus among the countries around the South China Sea that are directly related to the sustainability of the environment and the ecosystem of the South China Sea with a country of interests with interests in the South China Sea.

c. Establishment of institutions
Establishment of institutions can be done by imitating the formation of CTI-FF initiated by Indonesia. Establishment of South China Sea MPA management agency can be done in advance through mutual agreement of country around South China Sea. With the agreement will be formed an institution that specifically follow up the formation and implementation of MPA South China Sea.

With the establish of South China Sea MPA will create the concept of integrated and connected sea protection. Where on the one hand the MPA formed by CTI-FF will support each other with MPA South China Sea, given its adjacent geographic location.

Conclusion
Through this kind of bottom up concept, the designation of conservation areas in Indonesia can be conducted successfull. This is because policies are derived from current conditions and proposals from parties either from the indigenous communities, local governments or even opinion from the experts. This kind of proposal is made as the basis of the determination of conservation areas in national level. The Central Government shall attempt to seek a solution when it turns out into overlapping with the international interest. One of the policies that the Government of Indonesia has ever taken is by issuing coordinate conservation area of Sawu marine in the interest of the archipelagic sea lanes passage of Indonesia.

Globally, the recent Indonesian concept can be implemented at the Asian level through the formation of MPA in the South China Sea region. Each country can propose and specify which zone
belongs to their conservation area. The proposal’s designation carried out by any country could be put together and made into a blue-print of conservation area in regional level.

The establishment of the South China Sea MPA area can take the example of Indonesia which establishes MPA at the national level up to initiate the formation of CTI-FF. The importance of the establishment of the South China Sea is not to close and obstruct customary use activities such as navigation, mining, submarine cable deployment etc. But the South China Sea MPA will be able to describe the zones based on its designation so that the concept of sustainable development can be implemented within a wider area.

It needs the cooperation and the concept’s unity of the marine sanctuary globally. Considering the marine ecosystems do not stand alone, but rather it is an ecosystem that will be interconnected to each other.

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Real Life Case in the Teaching of Social Marketing

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ABSTRACT

Social Marketing seeks to develop and integrate marketing concepts with other approaches to influence behaviors that benefit individuals and communities for the greater social good. This is the endorsed definition by the Boards of the International Social Marketing Association, European Social Marketing Association, and Australian Association of Social Marketing.

The author introduced this course several of years ago. This is because of her engagement in non-government organizations. During the early years of the course, the professor would result to published case studies and theoretical campaigns. As more social enterprises emerged, she decided to tap these social enterprises and became clients of the students enrolled in Social Marketing.

The most current case used for the class is an issue that the University faces. This is the Happy Thursday (HappyT). School days are from Monday to Thursday. Thus, it became a tradition for students to start celebrating their weekends on Thursday nights by having drinks at nearby bars. Drinking is not a problem but when you drink beyond one’s limit and become rowdy resulting to fights and brawls, then it becomes problematic. Recently, there have been several unwanted events that brought the police conducting arrests and raids. Negative news were published in dailies. The University’s reputation is at stake and the administration is seeking creative ways of solving and addressing this issue.

Thus, the professor made this issue as the final requirement for the Social Marketing class. Students were grouped and each of them came up with social campaigns/advocacy campaigns, which they posted online. The students enjoyed and they felt fulfilled as they were able to create awareness and suggest solutions to the HappyT situation.

1. INTRODUCTION

In the early 80s, an Anti-Drug Commercial - Your Brain On Drugs a brief but powerful commercial started airing on network television. Using today’s term, it went viral. This campaign was created by the New York City-based nonprofit organization Partnership for a Drug-Free America, known today as Partnership at Drugfree.org. This ad has been copied, quoted, and spoofed several times and until today remains to be one of the most memorable and effective examples of social marketing.

While marketing is geared towards selling goods or services, the “product” in social marketing is human behavior. Using tools in commercial marketing and social sciences, social marketing is proven to influence behavior in a sustainable and cost-efficient manner. If one company can sell shampoo, why not equality for women?

Social campaigns aims to promote ideas that encourage positive behaviors like segregating trash or wearing seat belts; or discourage negative behaviors, such as taking drugs or drunk driving. The bottom line is not to earn money but creating a better society.
Social marketing is used primarily by nonprofit organizations, charity foundations, and government agencies. However, recently we have seen a lot of private companies mounting social campaigns. One such popular company is Dove with its Real Beauty Campaign. The course social marketing was offered as an elective for the Marketing course under the Ramon V. Del Rosario School of Business, De La Salle University. The author of the paper is part of an NGO thus the inclination to develop such a course and teach it.

2. METHODS

In the teaching of the course, the author used her own connections to provide a more substantial and authentic experience. There have been several times that the course helped social enterprises under the Gawad Kalinga Community Development Foundation, Inc. (GK) a Philippine-based movement that aims to end poverty for 5 million families, by first restoring the dignity of the poor. We would have a visit of the farm and help starting entrepreneurs. Also, using the author’s own connections, she would partner with several NGOs that need help like Caritas Manila, Inc., the leading Catholic agency for social services and development in the Archdiocese of Manila and a lead provider of technical assistance to social service and development ministries.

With the rise of social media, the author now uses this almost free media to create social campaigns. The campaigns are now based on social issues that students are interested in. These are current, relevant and real life issues like drugs, drinking, and depression among others.

The grading for the course is based on actual results of social media posts. That means likes, shares, comments. As a benchmark, the goal is to reach 5,000 likes. The teacher also asks the challenges they faced and how the campaigns can be improved further.

3. RESULTS AND DISCUSSION

One of the issues that was currently used in class was Happy Thursday. Happy Thursday is a weekly event near the campus. Classes at De La Salle is from Monday to Thursday. Students end the week by going to nearby restaurants and bars on Thursday night. It has gotten popular as several blogs and articles have come out about it.

“Happy Thursday” is a social trend and tradition that ensures us that we’ll end our week with loads of fun and adventure by experiencing new things, meeting new friends, and getting a taste of pop culture. The question is, what is this Happy Thursday everyone is talking about? Everything happens in Taft, the place itself is unique and known for being the college belt of the Lasallians and those from Benilde. From their commercial areas, restaurants, and bars, one thing is for sure, everyone has fun in Taft. (Duavit, 2016)

Happy Thursday is the known tradition for those from DLSU (De La Salle University) and CSB (College of Saint Benilde) that’s been going on for as long as anyone could remember. With their schools just meters away from accessible bars and restaurants, gathering and socializing is not a problem. (Duavit, 2016)

Being part of the 21st century, being social is an absolute “necessity” therefore creating the trend of “Happy Thursday.” Even students from Ateneo, UP, and UST make their way to experience the trend itself. Who can’t wait to break away from school and have fun? For sure, Happy Thursday is indeed something students look forward to. (Duavit, 2016)
What is the trend that makes Happy Thursday a weekly event? First of all, DLSU and CSB go by the four day schedule which gives them Friday as a day off. Celebrating the week’s end by having fun is the prize they get for a week of hard work. (Duavit, 2016)

Aside from being a time with friends, Happy Thursday relieves stress. Since there’s barely any class on Fridays for Lasallians, it makes it easier for students to go there whether they have a hangover the next day or not, they don’t have classes to attend to. “Happy Thursday” relieves stress and helps escape reality for a while. (Lim, 2016)

Based on the article from Business Mirror dated July 6, 2015- “According to locals, Happy Thursday is credited to students of the De La Salle University (DLSU).”

“Happy Thursdays are on Thursdays because it is the last class day of the week for Lasallians [and when] they unwind and stay out later than the usual because they do not have to go to school the next day” Trisha Doragos, 19, and Mitchelle Mesina, 21, told the BusinessMirror. Both are DLSU students.”

Dorago and Mesina said many engage in Happy Thursdays to unwind and have fun with friends.

Students of colleges around Taft see Happy Thursdays as “a reward for their industrious academic performance during the week,” said Alberto Joseph Quintana, a 19-year-old Civil Engineering student from DLSU.

“I just want to chill [out] and celebrate the end of a stressful week in school” said Samantha Florentino, a Dentistry student from Centro Escolar University.

“I go there to bond with friends and have cheap drinks,” said Zyrile Gomez, a 19-year-old Journalism student from the University of Santo Tomas (UST).”

Based on this article, it is not only famous among La Sallians but students from other schools go to the bars near DLSU. But things have not all been pleasant. As reported by the Inquirer last August 29, 2017 - At least 23 minors have been rounded up when Manila authorities raided a strip of bars along Taft Avenue, few meters away from De La Salle University and College of Saint Benilde on Thursday night.

“This was confirmed in a tweet by The La Sallian, the official publication of DLSU. It said the raid was aimed at searching for illegal substances and minors drinking alcohol in bars only few meters away from the school. It said the minors have been detained at the Crimes Against Persons Investigation Section of the Manila Police District. But it also clarified that majority of arrested minors are not students of DLSU nor CSB.”

For MPD’s part, spokesperson Superintendent Marisa Bruno said in a radio report that police raided three bars near the university, The Barn, Beach and Plato Bar.

Recently, Philippine Daily Inquirer columnist Ramon Tulfo wrote that illegal substances, including Valium and marijuana, have been sold by some CSB students in three establishments on Taft Avenue which he did not name immediately.

Tulfo said in his February 17 column that he learned of the ongoing illegal activities from his daughter, who allegedly purchased marijuana from one of the pushers near the school.

“The coffee shops are Beach, Barn and Plato where students buy drugs from fellow students and other pushers,” Tulfo said.”

With these recent developments, the school has explored the idea of changing the free day from Friday to Monday but the student council did not approve this. The administration is worried...
because it paints a negative picture for the University and its students. The Chancellor of the University talked to the chair of the Marketing department to start positive Happy Thursday campaigns.

The class was divided into groups and several campaigns were developed and placed on social media. Although the issue was all the same, the students came up with different ways to lessen the problems associated with Happy Thursday. The videos showed the negative effects of getting drunk, advocating responsible drinking, Happy Thursday is a choice and presenting other options apart from drinking. Below are links of the videos:

https://www.facebook.com/coleengranda/videos/10208521919272442/?hc_location=ufi
https://www.facebook.com/nigel.maclang/posts/1434097919944369?hc_location=ufi
https://www.facebook.com/gabbvaldes/posts/1221184794586096
https://www.facebook.com/ylagarchitorena/posts/10206329151346075
https://www.facebook.com/groups/1930084687227643/

The videos garnered thousands of shares, likes and hundreds of comments for just less than 3 months. They were submitted to the Philippine Association of National Advertisers as an entry to the Social Advocacy campaigns of schools. They did not win but they were among the top contenders among several schools nationwide where only one could emerge a winner.

As a result of all the buzz for the subject, Social Marketing will no longer be an elective but a major subject as a directive from the Dean of the College of Business. Thus, all marketing and advertising students will now enroll this subject. This is also inline with upholding ethics in the teaching of business subjects. To add the subject involves community engagement, which is one of the core values of Lasallian education. In the past, students who have taken this elective suggest that it become a major subject – that will now be implemented.

Teacher evaluation is also high for this subject. The author got Outstanding evaluation for the subject. The comments of the students include appreciating real issues, high involvement and being results driven. The students like seeing their efforts gaining traction and having real impact. In their own small ways, they are able to create a better society.

4. CONCLUSION

For students, Social Marketing is a course where they actually plan, implement and measure social campaigns and advocacies. They get fulfillment because they are able to effect action and change. Unlike their other marketing subjects, this subject does not focus on profits but on knowledge, attitudinal and behavioral change. It is also fun because they are able to create videos, which they post on social media and see how people react to them.

For the industry, Social Marketing can be a partner for social enterprises and start ups, who need social campaigns, marketing and advertising help. They can tap the class and its students to help them with strategies and campaigns. It will be a win-win situation because the companies get free help and the students get to work with real clients, which will be a better learning experience than theoretical papers.

For the academe, Social Marketing should not be confused with Social Media Marketing. Social Marketing is about changing knowledge, attitude and behavior on a social issue. The ultimate goal is to make a better society. In the teaching of this course, it would be good to work with issues
that are close to the hearts of the students. This already captures their attention and provides motivation. Using real life cases particularly recent issues give urgency and seriousness of purpose. Students will be serious in their efforts to be part of the solution and to make an impact. Apart from real issues and real clients, social experiments can also be another activity that can prove to be fun and relevant. The goal for social experiments is to promote positive values, attitudes and behaviors. Students can practice their creativity in executing these experiments.

Learning should go beyond the classrooms. In fact, more learning happens outside. So the role of the teacher is to bring the outside world in the classroom. Let them experience how to create and implement their learning. And let them learn from the mistakes and the challenges they faced.

To conclude, the classes are able to create knowledge, influence attitude and behavior. This is what social marketing is all about and the class is able to achieve that.

5. ACKNOWLEDGEMENT

This paper would not have been possible without the support of my students in Social Marketing. I recognize their efforts in trying to come up with creative and impactful videos that hope to influence positive behavior. I thank them for allowing me to explore other ways of imparting knowledge and making them learn beyond the classrooms.

I would like to thank my department and my college for allowing me to introduce this course as an elective. I thank them for trusting in my capacity to teach Social Marketing. And I would like to assure the department that I can share my connections and my cases to other teachers who will be tasked to teach this course. Animo La Salle.

And to my family who supports me in this passion of teaching minds and touching hearts, my heartfelt love and gratitude. Of course to our God who has given me a heart of service. All for the glory of God.

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1013
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Cross Border Relationship Commitment, Innovativeness and Adaptation: A Study of SMEs in ASEAN Member State

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Abstract

The contribution of Small and Medium Enterprises (SMEs) to the development of national economy worldwide has increased significantly in recent years. Acknowledging the important role of SMEs in economic wellbeing, governments in many countries establish programs and policies to spur internationalisation and exploit opportunities in foreign markets. Accordingly, the ability to compete in a complex and competitive international market is critical for international success. Relationship commitment is important because strong bonding resulting from commitment of partners to the relationship facilitates resource sharing hence overcoming the limitation of resource scarcity. Consistent with previous studies, we propose the notion that SMEs ability to develop and maintain relationship commitment is dependent on innovativeness. Additionally, internal adaptation fosters cross-border relationship between exporters and importers. This study investigates the effect of innovativeness on relationship commitment. This study also examines the moderating function of adaptation. According to a sample of 208 exporting SMEs, the effect of innovativeness on relationship commitment is nonlinear which indicates moderating effects of adaptation.

Keyword: International Relationship Commitment, Entrepreneur Orientation, Innovativeness, Adaptation, SMEs

Introduction

Small and Medium Enterprises (SMEs) contribution to the development of national economy worldwide has increased significantly in recent years. For example in ASEAN region SMEs accounts for more than 95 percent of total business establishments and created more than 51 percent of employment among ASEAN member states (AMS). In term of cross border activities where there are substantial opportunities for growth, SMEs contributed between 10 – 30 percent to total export value. In comparison, SMEs contributed higher percentage (51 percent) to total export in high income countries (World Bank, 2003). This indicates that there are rooms for improvement, taking into account globalization factor that has caused greater integration of world market by reducing barriers to cross border transactions. Since there is huge potential for SMEs to establish their international market, the ability to explore and exploit cross border opportunities should be the main agenda for economic growth.

Acknowledging the important role of SMEs in economic wellbeing, the ability to compete in international markets is critical for international success. AMS have taken strategic actions and developed policies and programs to enhance their SMEs competitiveness so as to achieve the objective of international expansion. Nevertheless, international market is highly competitive and
complex and at the same time demands resource commitment. For SMEs this is very challenging due to the fact that they are disadvantaged as a result of limited internal resources. Our view is that policy and programs development at macro level are pertinent to ensure the existence of support structure and establish ecosystem enabling SMEs to realize their full potential. This study also believes that competitive development at firm level focusing on internal capability and strength is strategically relevant to address the current issues and future challenges of SMEs internationalization. Therefore, this study aims to contribute to existing literature by developing a conceptual framework that will assist SMEs in developing competitive business model in cross border market.

Notwithstanding the limited internal resources, growing number of SMEs have successfully entered foreign market and able to compete with resourceful multinational enterprise (MNEs). Given that international market is costly to access the success of SMEs’ international venture is remarkable achievement particularly in the context of emerging market and accordingly warrants a closer examination. Previous studies advance the notion that SMEs leverage collaborative relationship with foreign partners (Ismail, 2016). This view is attributed to the fact that relationship is helpful in overcoming the disadvantage of small firms as a result of resource scarcity, which explains their strong performance in foreign markets (Pinho, 2015). In addition, collaborative relationship allows resource sharing and serves as conduit to information flows between partners. Thus building close and working relationship with foreign partners is strategically critical in overcoming resource limitation and therefore fosters SMEs competitive advantage in foreign markets. In ASEAN context, one of the main policy agenda is the integration with regional value chain (ASEAN Secretariat, 2015) which is helpful in managing competitive environment brought about by globalisation.

Previous studies maintain that commitment to relationship is a manifestation of relationship strength between partners, which in turn facilitates resource sharing. The literature also advocates the concept of entrepreneurship orientation suggesting intimate relationship between competitive ability and entrepreneurship values embedded within the firms. Following Lumpkin and Dess (1996) and others we view that one of the central traits of entrepreneurially oriented firm is innovativeness which allows firm to innovatively create solutions to customer problems ahead of competitors.

Closed relationship between business partners is built upon mutual agreement and reciprocal benefits whereby expected relationship outcomes are explicitly defined. Partners in the relationship expect the other party to make adjustment and meet each other expectations. In other words adaptation of processes and routines to meet partner’s requirements is prerequisite to long lasting collaborative relationship and therefore establishes satisfaction and trust between partners hence resource exchanges. Thus, if SMEs want to realize the effect of innovativeness on relationship commitment, adaptation of processes and routines is essential and prerequisite.

In this study, our contribution to the literature is two folds. This study examines the impact of innovativeness on the relationship commitment between cross border partners in export context. Second this study investigates moderating influence of adaptation on the impact of innovativeness on relationship commitment.

**Literature Review and Hypotheses**
Relationship commitment

Inter-organizational relationship allows resource sharing and thus assists exporting SMEs to overcome resource limitation and compete in cross border markets. A close and working relationship with a foreign firm is imperative in leveraging market knowledge of local firms. Along this line commitment to a cross border relationship is an important strategic formulation to obtain international competitiveness.

Following Morgan and Hunt (1994, p. 23) this study defines relationship commitment as “...an exchange partner believing that an ongoing relationship with another is so important as to warrant maximum effort to maintain it; that is, the committed party believes the relationship is worth working on to ensure that it endures indefinitely.”

Commitment assumed a central role in the development of models for buyer–seller relationship (Skarmeas, Katsikeas, Spyropouiou, & Salehi-Sangari, 2008). Johanson and Vahlne (2006) explain relationship commitment from the incremental internationalization platform and insist on the development of relationship, knowledge, and opportunity in international market. This means that commitment to the relationship lets SMEs to produce market oriented outcomes and meet customers [partners] expectation. Consequently, competitive ability of SMEs is built upon strong relationship with foreign firm. This suggests that commitment to the relationship is an essential ingredient in the process.

Entrepreneurship Orientation

Entrepreneurial value is an important resource for small firms because it deals with strategic process that facilitates the achievement of competitiveness, especially in international markets. Firm’s with embedded value of EO spurs the pursuit of new opportunities to achieve targeted performance. In the context of cross-border venture, firms with embedded entrepreneurial values are capable of overcoming inherent weaknesses and internationalizing successfully (Knight & Cavusgil, 2004).

Scholars believe that EO is a multidimensional construct. Lumpkin and Dess (1996) view EO dimensions as independent and may vary due to context. Parallel to this view, Lechner and Gudmundsson (Lechner & Gudmundsson, 2014) assert that the dimensions may not necessarily covariate, suggesting independent causal effect to other variable. Several studies investigated the non-aggregate (independent) effect of EO dimensions (Ismail, Isa, & Ali, 2013; Lechner & Gudmundsson, 2014). Similarly, this study investigates the insight of EO and focus on the independent effects of innovativeness.

Innovativeness reflects a firm's tendency to engage in and support new ideas, novelty, experimentation, and creative processes that may result in new products or processes (Lumpkin & Dess, 1996). Innovative activities may increase a firm’s potential to leverage its capabilities by
entering new markets (De Clercq, Sapienza, & Crijns, 2005) and developing key competences such as knowledge, and engenders the opening of new markets and the development of new methods for doing business (Knight & Cavusgil, 2004). From the perspective of competitive advantage, innovativeness stimulates employees’ creativity and assists in producing outcomes in line with market demand better than competitors. Therefore innovativeness helps firms to actively seek new way of doing business and creatively meet the changing needs and requirements of partner. This study proposes the following hypothesis.

Hypothesis 1. Innovativeness positively and significantly effects relationship commitment.

Adaptation

Long lasting relationship entails continuous adaptation to needs between partners. In this context, Hallen, Johanson, and Seyed-Mohamed (1991) suggest that adaptations can be described as the investment of products, processes, or procedures to meet the specific needs of an exchange partner. Firms in relationships carry adaptation to make significant adjustments to ensure continuous business exchange and to fit into changing business environments (Hallen et al., 1991). Adaptation is a manifestation of a firm’s response to the needs and requirements of a local partner. Relationship adaptation can improve channel efficiency (Kent & Mentzer, 2003) and reduce customer cost, thereby increasing sales (Cannon & Homburg, 2001).

The context of exporting suggests that firms should find ways on how to adjust their marketing strategies and tactics to fit into market requirements. Given the dynamic environment of international markets, management's reaction to environmental threats in the form of export adaptation strategies was introduced as the key driver of superior performance. In an empirical study, Navarro, Losada, Ruzo and Diez (2010) found that marketing strategies adapted to the needs and preferences of the foreign markets would have positive effects on managers’ perceptions of their achievement of competitive advantages, thereby indirectly boosting managers’ satisfaction with export activity.

Innovativeness maintains competitive actions by creatively fulfill the needs and requirements of partners and produce new product, services or process thereby driving firm commitment to relationship with foreign partner. The internal adaptation of firm processes and routines induces innovativeness, which helps SMEs creatively respond to the future needs and expectation of a partner ahead of competitors hence partner’s satisfaction and greater commitment. Thus, this study formulates the following hypothesis.

Hypothesis 2. Adaptation moderates the relationship between innovativeness and relationship commitment.

Methodology
Sample and data collection

The context of this study is Malaysia, one of the founding members of ASEAN. The sample consisted of cross-industry exporting SMEs manufacturers. Small firms comprise 56.7% of the samples. This study adopts the Federation of Malaysia Manufacturer (FMM) criteria to determine the industry to which the manufacturers belong. The food industry comprises the highest percentage at 27.4% of total respondents. The population of Malaysia consists of predominantly Malay and Chinese ethnicities. Thus, in this study, 59.1% of the respondents were from Malay-owned firms, followed by Chinese (27.9%), and others (11.1%).

Data were obtained via mail survey and drop off. Respondents were notified of the forthcoming survey followed by an email containing the questionnaire. The different methods of data collection were compared, but no significant differences were found.

Based on the FMM directory, only 851 firms met the criteria for this study. Seventy-six firms refused to participate, were not reachable, or had closed down. Finally, a total of 208 firms participated in the survey, which constituted a 26.56% (208/783) effective response rate.

Instruments

For innovativeness, scales were developed by Knight and Cavusgil (2004), Nasution and Mavondo (2008), Zhou (2007), Wang (2008), and Covin and Slevin (1989). For the purpose of this study, some scales replicated the original while others were adapted. The scale was the 7-point Likert scale with a range of 1 as “not at all” to 7 as “to a great extent”.

The scales for commitment were revised and adapted for this study from the original version developed by Leonidou, Katsikeas, and Hadjimarcou (2002) and Skarmeas, Katsikeas, Spyropoulou, and Salehi-Sangari (2008). Finally, the scale for adaptation [five items] was developed by Leonidou and Kaleka (1998).

Validity and reliability

We conducted factor analysis using principal component analysis and Varimax rotation prior to hypotheses testing. All factor loadings ranged from 0.70 (Inov02) to 0.88 (Adap02), which indicated that all items explain at least 70% of the variance of the construct (Chin, 1998).

Cronbach alpha was calculated to obtain evidence on the reliability of the scale. As shown in Table 1 the values for Cronbach alpha ranged from 0.88 to 0.90 which was above the threshold (Fornell & Larcker, 1981; Nunnally, 1978)
The values for average variance extracted (AVE) were 0.51 and above, which were above the minimum level of 0.50, hence supporting convergence validity for all constructs.

To establish discriminant validity, we compare the shared value between constructs and the square roots of average variance extracted for the constructs. The results in Table 1 indicate that the constructs are distinct. Thus, discriminant validity is assumed.

### Table 1  Correlation between Constructs

<table>
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<tr>
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<th>Alpha (α)</th>
<th>AVE</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<tbody>
<tr>
<td>1. Innovativeness</td>
<td>0.88</td>
<td>0.51</td>
<td>0.71</td>
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<tr>
<td>2. Commitment</td>
<td>0.89</td>
<td>0.60</td>
<td>.34***</td>
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<td>3. Adapt</td>
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<td>.32***</td>
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</table>

Note: Square Roots of Average Variance Extracted is shown in diagonal. *p < .05; **p < .01; ***p < .001.

### Findings and Discussion

#### Direct effects

The results of hierarchical moderated regression analysis are shown in Table 2. Model 1 indicates that 12.2% of the variance in relationship commitment is explained by control variables and independent variables. Adding moderating variable (adaptation) in Model 2 increases the variance by 5.3%. The results indicate that innovativeness is not significantly associated with relationship commitment thereby Hypothesis 1 is not supported. This finding is surprising taking into account the need for SMEs to be innovative in competitive international market. One explanation that seems to concur with this finding is that the effect of innovativeness is context dependent, suggesting that when competitive intensity and market turbulence were high the outcome of innovativeness is significant. Therefore the respondents in this study perceive that the competitive intensity is low hence does not justify the need for innovativeness.

#### Interaction effects

Adaptation is postulated in this study as a moderator, which explains the interaction. We proceed with the next research issue: adaptation moderates the relationship between innovativeness and relationship
commitment. Table 2 exhibits the results of hypothesis testing as exhibited by coefficient estimates and t-value in Model 3.

### Table 2 Hierarchical Moderated Regression Analysis

<table>
<thead>
<tr>
<th>Variables</th>
<th>H Direct Effect on Relationship Commitment</th>
<th>Interaction Effect on Relationship Commitment</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
<td>Model 3</td>
</tr>
<tr>
<td><strong>Control Variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm Size</td>
<td>-0.06(-0.84)</td>
<td>-0.26(-0.35)</td>
<td>-0.03(-0.43)</td>
</tr>
<tr>
<td>Ownership</td>
<td>0.05(0.66)</td>
<td>0.05(0.66)</td>
<td>0.05(0.67)</td>
</tr>
<tr>
<td>Industry</td>
<td>0.06(0.98)</td>
<td>0.05(0.87)</td>
<td>0.01(0.17)</td>
</tr>
<tr>
<td><strong>Independent Variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovativeness</td>
<td>H1 0.64(0.52)</td>
<td>0.38(0.70)</td>
<td>0.07(0.94)</td>
</tr>
<tr>
<td><strong>Moderator</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adaptation</td>
<td>0.19(2.83)</td>
<td>0.16(2.41)*</td>
<td></td>
</tr>
<tr>
<td><strong>Interaction</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovativeness x Adaptation</td>
<td>H2 -0.18(2.41)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>R^2</strong></td>
<td>0.122</td>
<td>0.175</td>
<td>0.181</td>
</tr>
<tr>
<td><strong>F-Ratio</strong></td>
<td>6.729***</td>
<td>8.198***</td>
<td>7.069***</td>
</tr>
</tbody>
</table>

Notes: Values of standardized regression coefficient are reported and t-values are in parentheses; Dependent variable is commitment. Dependent Variable: Relationship Commitment. *p < .05; **p < .01; ***p < .001; Durbin-Watson = 1.966

As shown in Model 3, the interaction explains 0.6% of the variance in relationship commitment. Interaction between innovativeness and adaptation is significantly effects relationship commitment hence full mediation effect, thus, Hypothesis 2 is supported. This finding is interesting and warrants further discussion based on its merit. Innovativeness is a cultural value of organization and describes as openness to new ideas and willingness to adopt new ideas (see Tsai & Yang, 2013, for review).

Nevertheless adaptation of internal routines and processes that is guided by innovative values allows SMEs to produce creative solutions and response to partner’s requirements. In addition adaptation is the manifestation of firm efforts and commitment to ensure the relationship is working and mutually beneficial to all parties in the relationship. This in turn engenders superior customer value offering than competitors hence enhance partner commitment to the relationship.

### Conclusion and Implication
EO dimensions may vary independently, which explains the different effect of each dimension on other constructs (Ismail et al., 2013; Lumpkin & Dess, 1996). Despite the growing number of research on EO reported in literature, our understanding remains limited (Lechner & Gudmundsson, 2014). This study aims to contribute to literature by investigating the innovativeness dimension of EO and its effects on relationship commitment.

Overall, our findings did not support the view that innovativeness is central to EO concept. Respondents did not believe that having innovative value helps them to establish relationship commitment. Contrary to Hypothesis 1, adaptation positive and significantly moderate the relationship between innovativeness and relationship commitment and therefore full mediation effect. This result indicates that innovativeness significantly effect relationship commitment only if SMEs implement adaptation on its routines and processes. This study manages to achieve this objective.

References


Business, 45(1), 49-58.
LAW ENFORCEMENT ON ILLEGAL FISHING BY FOREIGN FISHING VESSELS WITHIN INDONESIA’S EXCLUSIVE ECONOMIC ZONE*

Melda Kamil Ariadno**
Aristyo Rizka Darmawan

Abstract

Indonesia has many maritime zones, one of which is the Exclusive Economic Zone (EEZ) that gives sovereign rights to Indonesia to utilize its living and non living resources in the water column up to 200 nautical miles. Unfortunately, the mega biodiversity of fish resources in EEZ has become the targets of illegal fishing by foreign ships coming from Thailand, China, and Vietnam. Measures that can be taken related to illegal fishing are already regulated under Indonesian law but are less effective and lead to pros and cons. Indonesia has even drowned foreign fishing vessels and sent diplomatic protests to the flag state from foreign ships carrying out the fishery crime. The number of law enforcement officers at sea against the crime of fishery is also a matter that needs to get more attention, especially the strategy that needs to be done so that all these agencies can cooperate effectively and efficiently. Currently, Indonesia is still trying to find a model of law enforcement system that will be applied to improve the effectiveness of illegal fishing undertaken by foreign fishing vessels in Indonesian EEZ. There are several models of law enforcement system against illegal fishing conducted in various countries including those in Australia and India that is considered effective enough in overcoming the problem of illegal fishing in Australian and Indian waters and violations in their maritime zone as a whole. This paper aims to discuss a model of law enforcement system on illegal fishing by foreign ships in the Exclusive Economic Zone, which is most appropriate to be applied in Indonesia by taking other countries best practices as a lesson learned.

Key Words: illegal fishing, foreign fishing vessels, law enforcement, EEZ

I. INTRODUCTION

Indonesian maritime zone, rich in fish and other marine biodiversity, often lead to illegal fishing. Most of Illegal fishing activities by foreign fishing vessels are conducted by neighboring countries in the Indonesian Exclusive Economic Zone (EEZ). Through various modus operandi, the foreign fishermen catch fish in Indonesian waters and then traded outside Indonesia with multiplied profits.104

Consists of 17,504 islands, Indonesia is the largest archipelagic State in the world with its sea area of 5.8 million km². With an area to such extent, Indonesia has a huge potential of fisheries resources in terms of both quantity and diversity. Fishing is a sector in which millions of people

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depend on as a source of food, employment, and income. Thus, the marine and fisheries sector has a vital and strategic role in building the national economy and also food security.

However, the great fisheries resources can’t be utilized optimally by the Indonesian traditional fisherman and small-scale fisheries due to the huge number of fish which are taken by foreign vessels through illegal fishing in Indonesia’s EEZ. Indonesia’s maritime zone that is often a point of illegal fishing lies within the waters of Arafura Sea, the Natuna Sea, North Sulawesi (Pacific Ocean), Makassar Strait, and West Sumatera (Indian Ocean). Such illegal activity may weaken the management of fishery resources in Indonesian waters.

EEZ, as prescribed in Part V of UNCLOS 1982 is a maritime area that stretched up to 200 nautical miles from the baselines of coastal states, where there are sovereign rights of a country to explore, exploit, conserve, and manage its natural resources, both living and non-living, from its waters to their bed and subsoil and with regard to other activities for the purposes of exploration and exploitation. Indonesian EEZ is part of the Regional Fisheries Management of the Republic of Indonesia, where its EEZ region has been claimed by Indonesia with the enactment of Law No. 5 Year 1983 on the Indonesian Exclusive Economic Zone. However, if Indonesia can’t maximize the utilization of the biological wealth in its waters, Indonesia may provide opportunities to other States (including land-locked States) around it region to enter Indonesia’s EEZ with agreements or arrangements in accordance with the provisions of Article 62 paragraph (4) (Article 62 paragraph (2) of UNCLOS 1982). Such situation is similar as to the provision provided under Article 29 paragraph (2) of Law No. 31 The year 2004 on Fisheries which states that a foreign person or legal entity may enter EEZ to conduct fishing based on agreement or the applicable rules of international law.

Nevertheless, many foreign ships enter Indonesia’s EEZ to conduct fishing activity illegally by not complying with the regulation as stated in the abovementioned articles. Throughout the year of 2014 alone, the Ministry of Maritime Affairs and Fisheries has arrested 115 illegal fishing vessels. One contributing factor is the limited fleet owned of surveillance vessels owned by the Ministry and the limited number of operation days, as well as the overlapping authority in monitoring illegal fishing activity.

This article aims to conduct a comprehensive study to not only see how the arrangement of the existing laws related to law enforcement on foreign vessels that engaged in illegal fishing activity in Indonesia’s EEZ but also to see how the practice done by Indonesia in conjunction with its efforts to protect marine resources in Indonesia’s EEZ from illegal fishing, particularly in its EEZ which include Natuna waters and North Sulawesi water. The law enforcement practices in other States such as Australia and India will also be discussed to be able to define what are the best practices that could

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107 Indonesia, Undang-Undang Perikanan, UU No. 31 The year 2004, LN No. 118 The year 2004, TLN No. 4433, Article 5.


be taken as lesson learned by Indonesia in combating illegal fishing by foreign fishing vessels in Indonesian EEZ.

II. MAPPING ILLEGAL FISHING PRACTICES IN INDONESIA

This section will be divided into two parts, namely the practices carried out prior to the Minister of Maritime Affairs and Fisheries Regulation No. PER.30/MEN/2012 on Fisheries Business in the Regional Fisheries Management of the Republic of Indonesia, amended by the Minister of Maritime Affairs and Fisheries Regulation No. 57/PERMEN-KP/2014 (Minister Regulation on Business of Fisheries in Indonesia’s RFM) and practices post the amended regulation.

Minister Regulation on Business of Fisheries in Indonesia’s RFM was established in order to optimize the management and to guarantee the sustainability of fish resources and the environment in order to realize the industrialization of fisheries. The Amendments to the 2014 Minister Regulation is to realize the management of fish resources responsible and countermeasures Illegal, Unreported and Unregulated (IUU) Fishing in Indonesia’s RFM. Some of the relevant provisions to combat IUU Fishing under the 2014 Minister Regulation is as follows:

a. The Minister Regulation mentioned that procurement of fishing vessels and fish transport vessels are not given to the fishing and fish transport vessels that had been previously arrested;

b. Management information system online is applied to support the effectiveness and efficiency of the implementation system of the scheme traces the origin of the fish. This is done in order to eradicate IUU Fishing activities;

c. All stakeholders in the arrest and fish transport that holds a SIUP, SIPI, and SIKPI license should participate in the prevention and control measures/practices of IUU Fishing.

Aside from the things above, Minister Regulation on Business of fisheries in Indonesia’s RFM also refers to several international legal instruments, including the 1993 Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, the Food and Agriculture Organization and the Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, 2009 Food and Agriculture Organization.

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110 Minister of Maritime Affairs and Fisheries Regulation No. PER.30/MEN/2012 on Efforts of Fish Catch in Republic of Indonesia Fisheries Management Area, State Gazette No. 81 Year 2013.

111 Minister of Maritime Affairs and Fisheries Regulation Republic Indonesia No. 57/PERMEN-KP/2014 on Second Amendment of Minister of Maritime Affairs and Fisheries Regulation No. PER.30/MEN/2012 on Efforts of Fish Catch in Republic of Indonesia Fisheries Management Area, State Gazette No. 1782 The year 2014.

112 Minister of Maritime and Fisheries Affairs No. PER.30/MEN/2012, Op cit., Article 33.

113 Ibid, Article 77 paragraph (1).
Thus, based on the explanation above, it can be seen that the Minister Regulation on Business of fisheries in Indonesia’s RFM is serious in combating and tackling IUU Fishing. These efforts does not only come from the Government of Indonesia, but also from entrepreneurs in the arrest and transport of fish in Indonesia.

Mapping of these practices will be divided into two parts namely the practices carried out before the Minister Regulation on Business of fisheries in Regional Fisheries Management and after the Minister Regulation is established. In general, the practices of illegal fishing alone can be classified into two, namely illegal fishing foreign ships and vessels, and foreign ships that had turned into Indonesian nationality and then conduct illegal fishing. The practices discussed in this article include the case of illegal fishing within Strait of Malacca and the South China Sea.

II.1. Case of Illegal Fishing in Strait Malacca

On 3 March 2010, the Directorate of Police Bodies of North Sumatra Regional Police caught KHF 1338. KHF 1338 is a Malaysian-flagged ship captained by Mr. Chat, a Thailand citizen. This ship carried out fishing activities in the Strait of Malacca waters, Indonesia. After examination, it had been found that the ship did not have a license to fish. This resulted Mr. Chat, the ships’ crew and their fishing boat to be taken to Water Police Directorate of North Sumatra Regional Police for further investigation. The ship that was captured was in a position of 04º 26 ‘061 “N - 099º 36’ 441 ‘BT from the lamp of Berhala Island, North Sumatra in the Strait of Malacca, Indonesia. The coordinates exist in the area of Indonesia’s Exclusive Economic Zone. Thus, the KHF 1338 fishing vessel suspected of violating Article 93 Paragraph (2) of Law No. 45 Year 2009 on the Amendment of Act No. 31 Year 2004 on Fisheries.

After the investigation done by water police investigators of North Sumatra, on 23 March 2010 the case file was transferred to the District Attorney in Belawan. On 25 March 2010, the prosecution published a P-18 and P-19 with instructions to request a criminal law expert as stated within the Minutes of Investigation pertaining to answer whether the Police investigator of the Republic of Indonesia (Police) is authorized to conduct locus delicti criminal investigations fisheries in the region Indonesia’s EEZ. The Police is, however, is not authorized to conduct investigation within Indonesia’s EEZ, thus the case was to be handed over the Indonesian Navy investigators or Fisheries investigators for further investigation. In accordance with the instructions of Belawan State Attorney, Director of Water Police and Regional Police of North Sumatera issued a Revocation Letter under the name of Mr. Chat and the case was handed over to the Indonesian Navy investigators (Lantamal I BLW) for further investigation.

Results termination and inspection of foreign vessels caught by Belawan SPSDKP and North Sumatra Police Agency was processed to obtain sufficient evidence. The process of the examination permit documents from the Indonesian government, are fishing gear used, catches obtained, as well as communication tools. After the processed by the agency who arrested the ship, foreign ships will be escorted to Belawan port for examination and investigation.


115 Every person who owns and / or operates the fishing vessel foreign-flagged fishing on ZEEI who do not have SIPI referred to in Article 27 paragraph (3) shall be punished with imprisonment of 6 (six) years and a maximum fine of Rp 20,000,000,000.00 (twenty billion rupiah).

Determination of evidence of the accused perpetrators of illegal fishing in fishing boat along with the ship's engine, Lessen Vessel book, amateur radio transceiver, compass, radio call, cash, fish caught will be taken and will conduct an auction by Belawan State Attorney. The results of the auction will be put into the State’s treasury through the Ministry of Finance of North Sumatra Province. Meanwhile, evidence of fishing gear (trawl nets) will be taken away to be destroyed by Belawan State Attorney.

The arrested crew of foreigners that were detained in the Control of Marine Resources and Fisheries (Pengawasan Sumber Daya Kelautan dan Perikanan: PSDKP) and Detention Police Agency of North Sumatra in undetermined period of time to serve as a witness in criminal cases of illegal fishing. Files that have been equipped and reported to the Ministry of Maritime Affairs and Fisheries is to be followed up.

The convicted illegal fisher in the region of Indonesia’s EEZ is delegated to the Belawan District Attorney and given trial at Fisheries Court/Medan District Court. If the defendant is guilty of illegal fishing activity shall be punished by imprisonment for three to four years and a fine of between IDR 300 million up to IDR 600 million. If the fine is not paid will be replaced by imprisonment for three months. The consideration of mitigating the defendant to enter a plea orally is in order to reduce the defendant’s sentence as they still have family that is dependents to them (wife and children) and to promise not to repeat such actions and will always consider the border area waters are entitled to catch fish.

II. 2 Case of Illegal Fishing in the South China Sea

On 17 October 2011, KM KH. TS 96 597, a Vietnam flagged ship was operating in Indonesia’s EEZ waters. The ship was operating in the area of fisheries law court under the District Court of Ranai. The ship was deliberately operating in Indonesia’s RFM and conducted business in the field of catching, cultivation, transporting, processing and marketing of fish. This ship did not have a SIUP license. The ship had been fishing in around 35 KG and aims to bring them back to Vietnam for sale. The ship was intercepted by the TIGER SHARK Patrol Ship 001 (Kapal Patroli HIU MACAN 001) during an operation of Monitoring of Marine Resources.

001 Tiger Shark Supervisory ship dropped down two personnel to inspect legal documents. In the end, the ship’s captain, Mr. Deeds Nguyen Dong, who is a Vietnamese citizen was unable to show the sublicense. Thus, along with the ship's captain and crew, the ship was detained and to be processed. Further, Mr Dong, as the captain of KH. TS 96 597 fishing ship was punished subject to Article 92 jo. Article 26 paragraph (1) of Law No. 45 Year 2009 on the Amendment of Law No. 31 Year 2004 on Fisheries.

Another example of an illegal fishing case is is the water of Natuna, Indonesia. In September of 2011, there was a Vietnamese Boat Motor numbered 95 049 BD, a TS-flagged fishing vessel and captained by a citizen of Vietnam. Initially, the ship wants to operate on Con Son Island waters in Vietnam. However, due to the failure of catching fish, the captain directed to change shipping lanes in the waters of the Natuna which lies on Indonesia’s EEZ. Fishing activity done by the vessel was using nets as its fishing tool.

118 Ibid.
119 Ibid.
120 District Court of Ranai, No. 53/ Pid. Prkn/2011/PN Ranai.
The vessel was then stopped by Indonesian patrol ship namely KP 674 Quail in the waters of the Natuna and the region of Indonesia’s EEZ. Several patrol officers came down and inspect the vessel to check whether or not they have a SIPI license to fish. After the investigation, there was no SIPI license found, thus the patrol ship brought the fishing vessel together with its captain and crew to Batam for legal investigation process. At the end, the decision stated that the captain committed the crime of illegal fishing subjected to Article 93 Paragraph (2) jo. Article 27 Paragraph (2) of the Law of the Republic of Indonesia Number 45 Year 2009 on the Amendment of the Law of the Republic of Indonesia Number 31 Year 2004 on Fisheries jo. Article 102 of the Law of the Republic of Indonesia Number 31 Year 2004 on Fisheries.

III. COMPARATIVE LAW ENFORCEMENT SYSTEM AT SEA

III.1 Law Enforcement System of United States of America’s Maritime Zone

Regulation on fishing in the United States of America (USA) existed until 1960 which depends on each States. Its jurisdictions reach three nautical miles from the coast, with a few exceptions for some state that get a few miles further. During this period, the sea area was not yet regulated by anyone or in other words it was open country with no sheriff.

In the mid 20th century, USA began to realize that technology has brought a big impact on fishing activities. Foreign ships are bigger, faster, and more powerful also started entering national waters and spend the fish stocks in the US. At that moment, American government began to realize that modern fishing methods can kill fish in the sea with ease, and law was required in order to control the fishing.121

Various segments of society took part in the formation of the law consisting of fishermen, marine scientists, and legislators. They believe that the wealth of the national fisheries can meet the needs of many generations, as long as the fishing activity is well controlled. The fishermen and marine scientists of the United States finally recognized as a leader in the development of mechanisms to prevent overfishing and marine habitat protection.

The development of law enforcement system in the USA started from establishing several acts, namely The Magnuson-Stevens Fishery Conservation and Management Act.122 Magnuson-Stevens Act (MSA) IUU Fishing as follows:123

a. Fisheries activities that violate the conservation and management measures, including various related international agreements which the United States is a member country;
b. Overfishing; and
c. Fishing activities that have an adverse impact on the seamounts, hydrothermal vents and cold-water corals beyond national jurisdiction.


122 Magnuson-Stevens Act (MSA) used as the foundation of the fishing industry and maritime recreation in the United States, especially in the state close to the fishery resources. The impact of the establishment of MSA itself is the result of domestic, export, distribution, and retail with economic benefits to reach 116 billion dollars and open a job for more than one million people. See: National Oceanic and Atmospheric Administration Fisheries, Fisheries Economics of the United States, (Washington: NOAA Technical Memorandum, 2011), NMFS-F/SPO-118.

123 United States of America, The Magnuson-Stevens Fishery Conservation and Management Act, Article 609 (e) No. (3).
IUU Fishing precautions set forth in the MSA is a certified vessel that the ship is free of IUU Fishing. The certificate issued for the vessel that is:\textsuperscript{124}

a. Never had problem with IUU fishing under international agreements and regional fisheries management, where the United States is a country member therein; or
b. Not identified by international fishery management organizations as a ship participating in IUU fishing activities.

There are also Institution and Distribution of Maritime Zone on Law of the Sea Enforcement in the United States, which include The Department of the Navy consisting US Marines and US Navy; United States Coast Guard; and Secretary of Homeland Security.\textsuperscript{125} Whereas, the distribution of maritime zone on law of the sea includes, Navigable Waters;\textsuperscript{126} Safety Zone;\textsuperscript{127} and Security Zone.\textsuperscript{128}

To protect their sovereign territories, United States has formed Maritime Security & Safety Teams to improve the United States” maritime security, with a mission to protect ships, ports, associated facilities, and cargo in the waters of national jurisdiction of the damage, as a result of crime, terrorism and sabotage.\textsuperscript{129} Coastguard is basically the key actor of law enforcement in maritime security issues in American water including those of illegal fishing.

III.2 Law Enforcement System of Australia’s Maritime Zone

As a federation State, Australia has several divisions associated with jurisdictions that rely on areas of Australia where problem arises. To cope with complexity as the product of a federal system of Australia, the Australian Government, States and Northern Territory agreed to co-provide clarity on jurisdictional overlap in the different levels of government in November 2000. The result of this cooperation is the establishment of Crimes at Sea Act 2000. Although the agreement governs the authority to investigate and prosecute crimes that are in relevant jurisdictions, the applicable international legal obligations, particularly UNCLOS in 1982 also remains to be seen.\textsuperscript{130}

The responsibility for securing the maritime region of Australia is widespread in some institutions of both the Commonwealth and States. These institutions are able to ask for the help of an ad hoc manner, and the state government may request assistance to the commonwealth government.

Such institutions include, Australian Defense Force especially Royal Australian Navy;\textsuperscript{131} Australian Federal Police; Australian Border Force; Australian Fisheries Management Authority; and Australian Maritime Safety Authority. Whereas the determination of Australia’s maritime zones are as follows:\textsuperscript{132}

\begin{itemize}
\item \textsuperscript{124}United States of America, \textit{The Magnuson-Stevens Fishery Conservation and Management Act}, Article 609 (d) No. (2).
\item \textsuperscript{125}Jock Pan, \textit{Federal Government of the United States}, (Washington D.C.: Xlibris Corporation, 2010), \textit{United States Secretary of the Navy}.
\item \textsuperscript{126}United States of America, \textit{United States Presidential Proclamation No. 5928}.
\item \textsuperscript{127}United States of America, \textit{Code of Federal Regulation}-Title 33, Article 165 sub part C.
\item \textsuperscript{128}United States of America, \textit{Code of Federal Regulation}-Title 33, Article 165 sub part D.
\item \textsuperscript{129}Ibid., Article 70103.
\item \textsuperscript{130}Australia, \textit{Australian Intergovernmental Agreement – Crimes at Sea 2000}, Attachment H, No. 2
\end{itemize}

1030
1. Inner adjacent area  
2. Outer adjacent area  
3. The area outside the adjacent area.

If there is any offense committed in the border area (either inside or outside), then the criminal law applied is the criminal law of a State which has jurisdiction over the border area. If the offenses are committed in the border area inside, then the criminal law imposed is the criminal law of the State, so that the authority to carry out prosecutions in general depend on the prosecutor of the nation, but it is possible prosecution was conducted by the Commonwealth Director of Public Prosecutions (CDPP) / Attorney General of the Commonwealth. ^133

Likewise, the criminal offenses committed in the area of external borders, but it is technically a criminal offense committed in the area of external borders considered as a crime against the Commonwealth. Australian Crime at Sea Act 2000 Appendix H: Intergovernmental Agreement has been anticipating this thing by showing indications to determine the use of the relevant jurisdiction. ^134

1. The state authorities investigate and prosecute if:
   a) The offenses occurred or performed on platforms or other installations;
   b) The offenses occurred in Australia with the aim of Australia's ship, but was still in the territory of the other part at the time of the criminal act occurred; and
   c) The suspect is an Australian citizen who was heading for Australia but was still in the area of the State at the time of the criminal act occurred

2. Commonwealth authorities investigate and prosecute if:
   a) The offenses made on or directed to ship the Australian Defense Forces (ADF) which plays outside the state.

As for the criminal offenses committed outside the border area, the power to arrest and prosecute is at the Commonwealth which is also the responsibility of the CDPP.

Australia has tried to overcome the law enforcement problems by issuing the Maritime Power Act in which lies the mandate to every maritime officers to conduct law enforcement at sea regardless the type of the crimes. This policy has successfully reduce the criminal rate in Australian Water and assure the maritime security in place.

**III.3 Law Enforcement System of Malaysian Maritime Zone**

One establishment of the Malaysian Government in marine law enforcement, maritime security, and the protection of national interests in the maritime zone is to form the Malaysian Maritime Enforcement Agency (MMEA) or also known as the Malaysian Maritime Enforcement Agency (APMM). The legal basis of the formation of the MMEA itself is with the publication of The Malaysian Maritime Enforcement Agency Act 633 on July 1, 2004. The main function of the MMEA is the deployment of troops in the maritime zones of Malaysia for the enforcement of law

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and order, the preservation of peace, safety and security, crime prevention and detection, arrest and prosecution of offenders and the collection of security intelligence.\(^{135}\)

In performing its duties, the MMEA has the authority to carry out actions necessary in order to carry out the functions previously mentioned, in particular the authorities, among others:\(^{136}\)

3. Receive and act on reports of criminal acts at sea;
4. Stopping, enter, inspect, and search any place, building, boat or plane, and to detain the ship or aircraft;
5. Request, inspect, copy, and summarizes the license, permit, record, certificate, or another document;
6. Investigate criminal acts at sea that is believed to be done, or will do or have done;
7. Implement hot pursuit;
8. Checking and take the fish, documents, equipment, goods, ship, aircraft or other objects related to criminal acts at sea that have been made or are believed to be carried out;
9. Dispose of fish, documents, equipment, goods, ship, aircraft or other objects related to criminal acts at sea that have been made or are believed to be carried out;
10. Holding the individual who is believed to have committed criminal acts at sea; and
11. Getting rid of ships believed to be detrimental to the interests or threaten the interests of order and safety in the maritime zones of Malaysia.

As a maritime law enforcement agencies in Malaysia, MMEA had a very challenging responsibility, and in addition to a role in the national territory, MMEA also should promote awareness of security in the maritime zone between neighboring countries.\(^{137}\)

Maritime waters, as has been mentioned previously defined as marine areas close to Malaysia, both inside and outside MFZ and estuarine waters.\(^{138}\)

When someone provides information/reports to the MMEA by its national law, the person can apply for a report status on investigation of criminal offense. Once the petition is filed, the report shall be issued no later than two weeks after the application is submitted. Both arrangements are seen as an attempt MMEA in order to achieve greater efficiency and transparency in carrying out its functions.\(^{139}\)

If MMEA failed to follow up on the report, the complainant could make a new report to the Public Prosecutor for the failure. Following this, the prosecutor then is entitled to request detailed report on the investigation has been MMEA criminal offenses were reported. In an effort to submission to the orders of the public prosecutor, stipulated that each MMEA officers who are not on the orders of the

\(^{135}\) Malaysia, Malaysian Maritime Enforcement Agency Act No. 633/2004, Article 3 Paragraph (2).

\(^{136}\) Malaysia, Malaysian Maritime Enforcement Agency Act No. 633/2004, Article 7


\(^{138}\) Ibid, Article 2.

public prosecutor to be considered in violation and will be sentenced to a maximum of one month and/or a fine of not more than RM 1,000.\footnote{140} However, if the MMEA managed to follow up (catch) the report and will enter the stage of the prosecution, the prosecution can not be executed without the written consent of the prosecutor.\footnote{141}

III.4 Law Enforcement System of Indian Maritime Zone

India has several law enforcement authorities at sea such as Police and Coast Guard, what distinguishes from Indonesia is the ministry of marine and fisheries of India does not have the authority to enforce the law at sea, it is different from the authority possessed by the Ministry of Marine Affairs and Fisheries through Directorate General of Marine and Fisheries Resources Control (Ditjen PSDKP) which also has the authority to conduct patrols at sea related to fisheries crime. The Indian Coast Guard can enforce the law in the Exclusive Economic Zone whereas, the Water Police can only conduct law enforcement in the territorial sea and can not perform enforcement to the Exclusive Economic Zone.\footnote{142}

Associated with the inter-agency coordination system that has the authority of law enforcement at sea, Indian Coast Guard said that there are no obstacles in the process of coordination, it has intensive coordination is done at various levels, from the ministerial level until technical officials are always done coordination quite intensive. In term coordination Indian Coast Guard has an intensive communication system with the Indian Navy.\footnote{143} Even the Indian Coast Guard explains also that in practice the coast Guard with the navy has a day to day coordination, so their coordination with law enforcement at sea is very good.

The fundamental difference between the Indian Navy and the Navy in Indonesia is related to their mandate. The Navy in India has only a mandate to defend the state at sea and has no authority to enforce the law, whereas in Indonesia naval forces have the authority other than to carry out state defense in the sea also have the authority to enforce the law against some lawlessness at sea.

Currently the Indian Coast Guard has stood alone and minimized the role of the Navy, it is because the Indian Coast Guard has stood for quite a long time of 40 years. At the beginning of the formation of the Indian Coast Guard consisted mostly of officers of naval officers, but over time the Coast Guard began to undermine the role of the Navy, and until now has had officers separated from the Navy.

In the case of law enforcement related to illegal fishing in India's Exclusive Economic Zone, the Indian Coast Guard plays an important role when finding illegal fishing, the Indian Coast Guard has the authority to arrest and bring it to the nearest port and deliver it to The police will then conduct further filtration process, so the Indian Coast Guard does not process the filtration until the court, but ICG may also be required to be witness in court when the court process takes place. With regard to the crew of the captured ship, based on information from Anis Haber, one of the staffs of the Director General of Coast said that all crew members were treated well and there was no confinement

\footnote{140}Ibid., Article 9 Paragraph (7).
\footnote{141}Ibid., Article 8.
containment of any kind, different from Indonesia which is the ship captured by ICG returned to the country of origin.

In enforcing the law on illegal fishing by foreign ships at ZEE, the government of India is taking more government-to-government policy, or solving the problem through both governments by bringing it into the diplomatic sphere, thus the Indian government feels it can run more effectively than it has to take care of case by case.

Also interesting in interviews with the Indian Coast Guard is that India also implements a system of licensing foreign fishing vessels that wish to fish in the Indian Exclusive Economic Zone, in which the licenses are explained in terms of the maximum number of fish that the fisherman can take and how many the maximum that can be taken and the reporting mechanisms as well as the fees to be paid to the Indian government. However, the licensing system is difficult to implement in Indonesia, basically the system has been applied by the Indonesian government after the evaluation of licensing policy to foreign vessels to make arrests in the sea of Indonesia ZEE enough to harm the Indonesian government, due to the number of foreign ships who did the transshipment and did not report the actual catch. Furthermore, Indonesia as an archipelagic country has ZEE that is wide enough so that to be able to conduct patrol and supervision is a challenge in itself. So that based on the policy of licensing is considered less appropriate to be implemented in Indonesia.

III.5 Law Enforcement System of Indonesian Maritime Zone

Indonesia’s enforcement system at sea is similar to Australia which consists of several agencies, but there are one or two differences, namely the regulation concerning the division of maritime zones and authorized agencies in carrying out law enforcement functions thereon. Indonesian Navy (TNI AL) has the task of enforcing the law and maintaining security in the sea areas of national jurisdiction in accordance with the national laws and international laws that have been ratified. In the explanation of the arrangement, which is intended to enforce the law and maintain security are all forms of activities related to law enforcement at sea in accordance with the authority of the Navy (Constabulary function) that is universally valid and in accordance with the statutory provisions applicable to addressing threats action, violence, threats of navigation, as well as violations of the law on marine areas of national jurisdiction. In addition, law enforcement functions performed by the Navy at sea is the pursuit, arrest, investigation, and the investigation of the case, which is then submitted to the prosecutor's office for prosecution.

Navy investigator mentioned in various Indonesian national law such as Article 73 paragraph (1) of Law No. 31 of 2004 on Fisheries, clarification of Article 17 PP 27 of 1983 on the Implementation of the Criminal Procedure Code, and the elucidation of Article 282 of Law No. 17 Year 2008 on the voyage. In practice, the Navy also often first arrest perpetrators of criminal acts, and once identified a criminal offense what will be given to the institution in accordance with the field. As an example of the Navy arrest perpetrators of criminal acts of illegal timber transportation, then after being arrested by the Navy will be submitted to the Ministry of Environment and Forests. Maritime Security Agency (Bakamla) in menyelenggaraan security and marine safety in certain regions form the Office of Maritime Security Maritime Zone, containing Prosecution Unit which

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Indonesia, Law No. 34 Year 2004 on Indonesian Army State Gazette No. 127 Year 2004

Ibid, Elucidation Article 9 huruf b.

carries out the prosecution, investigation, and the initial investigation for violating the law of the sea.\textsuperscript{147}

Water Police (Polair) in organizing technical assistance in the field of water police accident investigation and prosecution of violations in waters including patrols and escorts performed by Law Enforcement Sub.\textsuperscript{148}

IV. Effort to Combat Illegal, Unreported, and Unregulated Fishing

As the largest Archipelagic State in the world, Indonesia has many advantages in relation to the sea. Indonesia has an area of ocean that reaches 64.97\% of the total area of Indonesia. The total area of the ocean is divided into three zones, namely the territorial sea, exclusive economic zone, and the sea area of 12 miles. With such large area of the sea, Indonesia gives its best in protecting its marine resources and the environment of the sea.\textsuperscript{149} The large area of Indonesia’s sea bring many business potentials in maritime sector. With such abundance, many parties come to exploit these resources by tourism. However many foreign countries also take action in exploiting Indonesia’s marine resources by conducting illegal, unregulated and unreported fishing (IUU Fishing). Such criminal act has brought Indonesia to materially detrimental and deleting of Indonesia’s marine resources.

To prevent such criminal act, Indonesia had designed a marine plan called the road map of 2015 to 2020. The road map 2015 to 2020 in combating IUU Fishing are as follow:

1. A long-term moratorium;
2. Ministry of Marine and Fisheries data transparency;
3. Realization a sustainable marine management;
4. Development of marine invesotry system;
5. Development of marine-based science; and
6. Embrace the Commission of Corruption to influence the Ministry"s performance.

To prevent and minimize the criminal act of IUU Fishing, an international action against IUU Fishing was drafted in 2001 known as the “International Plan of Action” (IPOA- IUU) in Rome, Italy. It is a voluntary instrument which may be applied to all States, a legal entity, and the fishermen.\textsuperscript{150} IPOA-IUU is also included within the series of the Code of Conduct for Responsible Fisheries, in response to the 23\textsuperscript{rd} session of the Committee on Fisheries, (COFI).

The objective of OPOA-IUU is to prevent, deter, and eliminate IUU Fishing by providing all States with a comprehensive, effective, and transparent measures, including through regional

\textsuperscript{147} Government Regulation No. 178 Year 2014 on Maritime Security Agency State Gazette No. 380 Year 2014, Article 28 Paragraph (1).

\textsuperscript{148} Chief Police regulation No. 22 Year 2010

\textsuperscript{149} Op cit ,Article 28 Paragraph (1).

fisheries management organizations established in accordance with international law.\textsuperscript{151} Therefore, IPOA-IUU incorporates principles and strategies as follows:

1. participation and coordination;
2. phased implementation
3. comprehensive and integrated approach;
4. conservation;
5. transparency; and
6. non-discrimination.

Regional Plan of Action (RPOA) for illegal, unreported, and unregulated fishing has the same objective as the IPOA, however it only focuses on several countries within a region. RPOA was established for the long-term sustainable protection of marine resources and the marine environment for the accomplishment of the importance of regional cooperation. Other objectives of RPOA is to enhance and strengthen fisheries management in the region, in order to preserve marine resources and environment and to optimize the benefits of adopting the responsible fishing practices. The actions include conservation of marine resources and environment, managing the capacity of fishing activity, and combating IUU Fishing especially in the region of South China Sea, Celebes Sea, and Arafura-Timor Sea.\textsuperscript{152}

V. SOME PICTURES IN INDOONESIAN EEZ

V.1 Tarakan

Field study in Tarakan for this research was conducted on 27 – 29 July 2016 in which research team conducted interviews with several State institutions, including Maritime Security Agency, Indonesian Navy, State Attorney Tarakan, Tarakan District Court, Department of Fisheries, the Harbor Master and Port Authority, and Water police. In Tarakan, foreign vessels who conducted IUU Fishing are mostly Philippine flagged vessels which were mostly captured by Indonesian Navy ships.

The main constraint felt by most of the law enforcement agencies in Tarakan in combating IUU Fishing is the infrastructure that has not yet been sufficient. Facilities and infrastructures are particularly related to operational surveillance vessels such as fuel, number of ships, logistics for patrol purposes, and so forth. Further, one of the constraints told by Indonesian Navy as the most


common agency who captured IUU Fishing vessels in Indonesia’s EEZ is the difficulty in patrolling its full potential due to the lack of budget for logistics, i.e. fuel. As a result, Indonesian ships patrolling is unable to sail through the ocean for a long duration of time.

V.2 Natuna Island

A filed study in Natuna island for this research was conducted on 8 – 11 August 2016 in which research team conducted interviews with several State institutions, including District Court of Ranai, State Attorney of Ranai, Immigration Office of Ranai, Maritime Security Agency of Ranai, PSDKP, and the Indonesian Navy. Cases of IUU Fishing in Natuna waters are mostly captured by Indonesian Navy, in which according to the numbers of cases recorded by Ranai District Court, in 2015 itself has reached 37 IUU Fishing cases.

Ranai District Court has different though regarding the policy of firing vessels (penenggelaman Kapal) because of a couple reasons, which is the high-cost to conduct the fire and the damage to the environment caused as it uses an explosive that can impact a lot of fish and other marine resources. A constraint to the Ranai District Court is the language used within the proceedings because the District Court is lacking translator to assist the defendant during court hearings. Another constraint from the District Court is that the countries of origin, which in the present case is the Embassies, do not acknowledge the defendant, thus the defendant is often not assisted by any legal counsel or any assistance both materially and immaterially.

VI. CONCLUSION AND RECOMMENDATION

VI.1. Conclusion

After a thorough study of both national and international laws and regulations on the enforcement against IUU Fishing by foreign vessels in Indonesia, hence several conclusions are as follow:

1. UNCLOS 1982 and IPOA IUU are two sources of international law relating to the efforts to combat illegal fishing, while RPOA is a regional movement in having the coordination of States to combat IUU fishing in the region.

2. Indonesia has made national arrangements to combat illegal fishing and to apply them in Indonesia’s EEZ.

3. There are various agencies enforcing the law on illegal fishing in Indonesia’s EEZ, such as Navy, Fisheries Surveillance Officers (PSDKP) and Bakamla, whereas Sea Police only enforces and practices in the territorial sea.

4. Investigation authority is only given to the Navy and PSDKP, whereas Bakamla does not have the authority to investigate.

5. Indonesia does not have a comprehensive regulation on evidence in fisheries criminal acts that accommodate electronic evidences.

6. Indonesia set fire to foreign fishing vessels that violate fisheries law in the EEZ by requesting a subpoena or a warrant from the District Court.

7. Indonesia has yet to implement provisions regarding prompt release.

8. Indonesia has yet to implement replacement of fines into imprisonment if
defendant fails to pay the fine.

9. Indonesia does not have an integrated law enforcement system and sophisticated monitoring system that involve the fleet at sea and in the air.

10. Some countries like USA, Australia, Malaysia and India have their own best practices and could become the best practices for Indonesia to learn

11. Australia with its Maritime Power Act has successfully combat the illegal fishing happening in its water as well maintaining the maritime security in its maritime territory.

12. American, Malaysian and Indonesian practice shows that single agency law enforcement (coastguard) has shown the effective mechanism in guarding the maritime security in their water

VI.2 Recommendation

Based on the conclusions stated above, the recommendations that can be given are:

1. Indonesia should enhance its domestic law in order to provide a solid foundation for the rule of law, including to set out more about:
   Defined procedure in firing vessels with comprehensive analysis of the environment prior its implementation by eliminating the complicated procedures, and without requiring a warrant or order from the District Court if it is felt to be more efficient and effective. The bombing or sinking the vessel has to be carried out without infringing human rights of the vessel’s crews and without polluting the marine environment.

2. Implementation on “prompt release”, particularly for large foreign and high economic value vessels.

3. The assertion of “maritime power” given to the law enforcement parties at sea with a flexible generalization as exemplified by the “Maritime Power Act” Australia.

4. Shall use specific tools for criminal acts at sea evidence, including those of electronic evidences such the trail of GPS, VMS, AIS, etc.

5. The application of imprisonment as a substitute fine punishment.

6. Indonesia must have integrated law enforcement system and sophisticated monitoring system that involves the fleet at sea and in the air (using aircraft involving the Air Force)

7. Indonesia needs to reaffirm its fisheries policy, especially in Indonesia’s EEZ.

8. Indonesia should not give rights to foreign vessels to catch fish and mobilize national fishing fleet to exploit Indonesia’s EEZ.

9. Indonesia must develop its EEZ by building a fishery processing plant at sea to secure the water from foreign infiltration as well to make the international fishing marketing becomes much more effective and efficient.

10. Indonesia could take example of Australian, Malaysian or Indian practices to combat illegal fishing in its EEZ. The Maritime Power Act is very effective and efficient to be adopted in the multi-agency law enforcement mechanism like in Indonesia, or Indonesia could adopt American, Malaysian and Indian practices by having single agency (like coastguard) in combatting illegal fishing as well as other maritime crimes.
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Minangkabau *perantau* and the negotiation of identity: "moved in and out" of the position of an outsider and insider

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**Abstract**

The aim of this paper is to discuss the movement of Minangkabau, the world’s largest matrilineal society, *perantau* (migrant) in Indonesia in maintaining their dual position and identity. Using qualitative methods, and Stuart Hall’s theory of identity, the paper will investigate how far these *perantau* negotiate their position and identity within their “two homes” (the origin and the host country). The paper argues that playing with cultural norms, using other and Minangkabau by turn, the *perantau* “moved in and out” of the position of an outsider and insider. By doing it they try to maximize their rights and privileges, that have given by the two cultural norms, so they can strengthen their position in the new home, while keeping their position in the old one. Moreover, the *perantau* tend to keep but modifying the Minangkabau Adat while moving out and in their “two homes”.

**keywords:** diaspora, Indonesia, identity, Minangkabau, *perantau*

**Introduction**

*Soal Archandra Tahar, Tokoh Minang tersentak terkait diaspora*

Regarding Archandra Tahar, Minangkabau main public figures snapped out of it in relation to diaspora (*Jawa Pos*, 21 August 2016).

The quotation above is a comment about Archandra Tahar, who was dismissed as Indonesian Minister of Energy, and Mineral Resources by Indonesian President Joko Widodo because of his controversial dual (Indonesian and USA) citizenship. He is appointed again as Deputy Minister of this Ministry after leaving his USA citizenship. Tahar’s case, whose was Minangkabau diaspora in USA for about 20 years, has made Indonesian government and people aware of the importance of exploring the contribution of Indonesian diaspora in building Indonesian state. Moreover, Tahar’s reply to the doubt of his Indonesianess and loyalty by saying;” *Saya Minang asli, bahasa Inggris saya Esmin,English Minang* (I am a native of Minangkabau, my English is *Esmin*, Minangkabau –English) (*Bisnis.com*, 22 October 2016)” may indicate the way he negotiates or adapts to his position as one of diaspora people, those who migrate outside their own place.

The migration of people from one place to another place is strongly made possible for various reasons. Economic and political matters are some significant reasons which are often associated with this activity. Quite often these reasons bring out into view the complexity of relationship between migrants and the host community. The migrants, even, to some extent, have to face some difficulty in managing a balance relationship with their own community or their left country. The impact of
this situation, there is a possibility they may lose their previous citizenship, as happened to Archandra Tahar, and have a political distance with their old environment, where they were born and raised. Moreover, there is possibility that they have to allow a part of their cultural identity merge with a new, perhaps strange, identity in a new place. These conditions may lead to distrust, either from their old community or the new one, regarding their loyalty, nationality, or political integrity. It is interesting to know, then, to investigate how far these diaspora people have still keep their cultural connection with their origin land, which may be in different country from their new land.

Because of that, regarding diaspora issues, one of the main themes is the best explanation on the questions: “why should they leave their origin of land?”, what kind of factors that made them should move to place of other whose culture might be different from their own one?”, as done by the Chinese, and Hadrami in Nusantara (Indonesia around). It is interesting to know how the diaspora people maintain their cultural and political identities in the new place, and how they look back at their departure place. It is assumed that diaspora communities have to face with various strategies to survive in their new places, either by adopting the new cultures, or by hybridizing it. They also, at the same time, have to face a possibility of “a charge of loosing” their original identity from their previous communities.

Taking these diaspora matters as a starting point, the aim of this paper, then, is to discuss the movement of Minangkabau perantau (migrant) in Indonesia in maintaining their dual position and identity. Minangkabau, is not only well known as the world’s largest matrilineal society but also as one that coexists amongst the mostly Islamic societies within Indonesia- the country with the largest Muslim population in the world. The paper will investigate how far these perantau negotiate their position and identity within their “two homes” (the origin and the host country).

There are some work on the activity of diaspora people, regarding their connection to their origin land and their contribution to the host country, such as Christomy (2016), and Elfira (2016). In investigating activities of Hadrami diaspora in Papua (Indonesia) Christomy argues that their intense interactions with the host community made them get involve with political and social matters of the colonial government and other communities. In return, their involvement gave them “a good bargaining position”. Christomy adds that these Hadrami diaspora did not tightly keep their connection with their origin land. While the work of Elfira 92016) analyses the activity of Minangkabau diaspora, living outside West Sumatran province (Indonesia). But, her research more focuses on the contribution of Minangkabau women diaspora, who establish inter-cultural marriages, in creating Minangakabau diaspora identity. These two works will be the foundation of this paper. The paper argues that playing with cultural norms, using other and Minangkabau by turn, the perantau ‘moved in and out’ of the position of an outsider and insider. By doing it they try to
maximize their rights and privileges, that have given by the two cultural norms, so they can strengthen their position in the new home, while keeping their position in the old home. Moreover, the *perantau* tend to keep but modifying the *adat* in moving out and in their “two homes”.

The analysis will be based on qualitative data, obtained using qualitative methods. Although Clive Seale warns that “there is a danger here of imagining that a particular interaction format (the unstructured interview) is an automatic guarantee of the analytic status of the data that emerge” (Seale, 1999:209), qualitative methods capture the contextual, real-life, everyday experiences of the individual interviewed (Lopez, 2003:7). Theory of diaspora and identity will be used in analyzing the data. Regarding diaspora, there are two types of diaspora: (1) *old diaspora*, yaitu people migration because of political reason or environmental damage, which force them to move to other places; (2) *new diaspora* people migration because of self choice, related to political and economical opportunities. Because of that, according to Freitag dan W.G. Clarence—Smith (1997:2) phenomenon of *new diaspora* is related to “coercion and choice”. Regarding cultural identity, Stuart Hall argues that “cultural identity is not a fixed essence at all, lying unchanged outside history and culture …cultural identities are the points of identification or suture, which are made, within the discourses of history and culture. Hall also argues that the identity is “Not an essence but a positioning” (Hall, 1990). Woodward adds that identity is fluid and dan contingent (Woodward, 1997:3). In order to protect informants’ privacies, their identities will be disguised by using pseudonyms.

**Minangkabau *perantau* and the negotiation of identity: ”moved in and out” of the position of an outsider and insider**

It can be said that *marantau* (migrating) is a kind of activity that is highly respected among the Minangkabau. In fact, the Minangkabau is not the only ethnic group in Indonesia, practicing this activity. Bawean people, for example, are also known for it. However, as many scholars such as Kato (1982) and Naim (1985) have argued, *marantau* for the Minangkabau is not only the side effect of urbanization. It is more than that, as it is a way of the *Adat* to survive. Because of that, the *Adat*, referring to both Minangkabau oral history, pertaining to the origins of alam Minangkabau, and the proverbs and aphorisms that serve as guiding principles and rules for ceremonies, conduct, and matrilineal kinship relations (Kato, 1982:33-34), a Minangkabau to ‘pai marantau (go on migration)’ to conduct a journey in searching for wisdom and prosperity. In other words, *rantau* is a place, provided by the *Adat*, for a Minangkabau, especially young men, to prepare themselves before carrying out tasks as a biological father for his own children, *urang sumando* (person in-law) of his wife’s maternal extended family, *mamak* (maternal uncle) of his nephews and nieces, and *Panghulu* (head of clan) in *kampuang halaman* (native village), in the area of Alam Minangkabau (the Realms of Minangkabau). *Rantau* originally referred to the territories outside Luhak nan Tigo, considered as
the origin of Minangkabau homeland. Today the term *rantau* refers to territories outside the Minangkabau mainland, which is the large part of West Sumatran Province.

Because of this activity, *marantau* (migrate) is one of the characteristic that is linked with the Minangkabau. *Perantau* is an Indonesian word to call a person who leaves his/her own home area to make his/her way in life. Arguably, this word is associated with this Minangkabau well known activity. According to Josselin de Jong (1980) the exodus of Minangkabau to *tanah baru* (new regions) started about the beginning of fifteenth century. Negeri Sembilan of Malaysia is a example of *tanah baru* that later become a *rantau* land. Moreover, Clammer (2002:141) argues that the activity of Minangkabau, one of the indigenous inhabitants in Southeast Asia, in migrating is one of the main factors in producing many of the now existing nation-states of Southeast Asia.

Since *merantau* activity is needed for the survival of *Adat*, the *Adat* provides *perantau* with some wisdoms, as expressed by this aphorism: *dimaa bumi dipijak, distinan langiaq dijunjuang, tapi adaik awak jaan dilupokan* where you set your foot down, there the sky is held in high esteem but our adat should not be ignored*. It encourages the *perantau* to adapt to the new environment without losing his/her own identity root. It seems that many Minangkabau diaspora implement this well known aphorism. For example, Elly, a Minangkabau diaspora in Italy, interpret this aphorism, taught by her parents, in her daily life by doing:

> Menyesuaikan diri dengan keadaan di sekitar tempat tinggal. Patuh dengan peraturan and hukum di negara tempat tinggal. Akan tetapi tetap bangga atas jati diri (Elly).

Adjust to the condition of environment where [we] live. Obey to the nowms and laws of the state where [we] live. But, [we] should be proud of [our] authentic character [Minangkabau]

Initially, as supported by the *Adat*, Minangkabau did *marantau* activity just for temporarily in order it to gain prosperity and wisdom before going back to participate in developing *kampuang halaman* (the homeland). Later on, many Minangkabau, either men or women, have stayed permanently in *rantau* land. According to the *Adat*, this type of *marantau* is called *marantau cino* (Chinese migration). One of the impact of doing *marantau cino*, especially for those who permanently living outside Indonesia, is that the possibility of having multiple identites, as Luna, who is living in the USA, expresses herself: “*Orang Indonesia Islam dari suku Minangkabau* (An Indonesian, Islamic Minangkabau person). Some of the *perantau*, even, conciously put forward or hide one of their multiple identities, depending on the situation, to suit themselves to changing environment:

> Orang Indonesia kalau saya berada di luar negeri. Sebagai orang Padang kalau berada di Indonesia

[I am] Indonesian if I am in overseas. A Padangnese while I am in Indonesia

However, it is misleading to assume that by playing with their multiple identities, these diaspora may have lost their identity as Minangkabau, since most of them still practice, to various extent,
Minangkabau Adat norms. Moreover, some informants say that the main reason why most perantau are proud of being Minangkabau is because of the Adat, which highly respect and give women significant roles within society. For most of them, it is the main character of Minangkabau Adat, which made Minangkabau different from other ethnic groups. They add that this Adat norm, to some degrees, has help them to survive in the new land, as expressed by one of Minangkabau diaspora:

_karakter Minang sangat melekat di saya yang salah satunya menjadikan saya sebagai "perempuan yang gigih dan kuat" (Olla)
One of Minangkabau characters, which has became a part of mine, is that it has made me “a persevering and strong woman”

Living in rantau land may force these perantau to adapt to the new norms in managing their lives. Possibly, it means that they allow a part of their cultural identity merge with a new, perhaps strange, cultural identity in a new place. It is arguably that, for some of the Minangkabau, the main purpose of these “merge of identities” is to make sure that Minangkabau, which is the main part of their cultural identity, still exists in a new place, a rantau land, as implied by the expression above.

Since marantau activity is encouraged by the Adat, there are many perantau who do several times before deciding to stay permanently in one place. They may face stratified rantau with, usually, various social stratum. Interesting to note that, some of them still refer to Alam Minangkabau as their origin of land, as expressed by Olla. Olla, a Minangkabau by blood, in fact, was born and raised by their Minangkabau parents in Jakarta, a rantau land, before moving to Germany after finishing her undergraduate study. However, Olla, grown up in Jakarta but influenced by Minangkabau values, still consider that Minangkabau is her homeland, not Jakarta:

_Seringkali saya mengacu Sumatra Barat sebagai daerah asal saya, ke pasangan agar dia tahu bahwa nilai-nilai yang saya bawa adalah nilai minang, bukan nilai “Jakarta” dimana saya lahir.
Quite often I refer to West Sumatra as my homeland to my partner [a German], so he can understand that I am influenced by Minangkabau values, not the values of “Jakarta”, where I was born.

As explained before that migrating to a new land outside Indonesia, some of these Minangkabau perantau may lose their identity as the citizen of Indonesia, a country of Minangkabau homeland. Some of them, even, are positioned as the outsiders of Minangkabau by their Minangkabau fellows themselves, as implied by this quotation:

_Malaysia luncurkan Buku Kamus Bahasa Minang
Malaysia launched Dictionary of Minangkabau Language (Singgalang, 8 Oktober 2015)

The quotation above is a newspaper title about the launching of Kamus Baso Minangkabau (Dictionary of Minangkabau language) at Institut Seni Indonesia (Indonesia Art Institute) Padang Panjang of West Sumatra Province (Indonesia). Its author, in fact, is Yos Magek Bapayuang, a native
Minangkabau who lives in the mainland of Minangkabau. But it was launched by The Malaysian Minister on Social Culture, Tan Sri Dato’ Seri Utama DR. Rais Yatim, a Minangkabau diaspora, who did *marantau cino* to Malaysia. Yatim was chosen because of his background as a Minangkabau diaspora from Lariang village of Agam regency, a part of Alam Minangkabau. However, based on the newspaper title, it can be said that identity of Rais Yatim as a Malaysian citizen is more put forward that his identity as a Minangkabau diaspora.

Yatim is well known as one of public figures who encourage Minangkabau people to practice their Minangkabau language. Interesting to know that Rais “plays” with his Minangkabauness in order to get a legitimation from Minangkabau community in *Ranah Minang* (the homeland of Minangkabau) regarding his involvement in the book launching as can be seen from the quote below:

> There are about 10 million Minangkabau, 5 millions in their homeland, while the other 5 millions are in rantau land (either in Indonesia or other countries). From this quite big amount of population, there are many who cannot have ability to speak the language, or not to get used to the language. It is expected that with this book launching *whip our spirit to love our own language* (quote from Singgalang news gate, 8 Oktober 2015 “*Menteri Malaysia luncurkan Kamus Baso Minangkabau*”)

It seems that Minangkabau diaspora has to share their cultural, and political identities between Malaysia and Indonesia. It seems also “Malayness” has become a thing that is offered to share by Minangkabau diaspora in Malaysia. It can be seen from the speech of Rais, Minangkabau diaspora who has become Malaysia citizen.

> Essentially, Minangkabau and Negeri Sembilan communities are from the same origin, the Malays. Apparently this idea can be one of the main frames to build, support, and glue the aspiration of one origin Indonesia-Malaysia (Dr. Rais Yatim, *Adat, the Legacy of Minangkabau*, quote from “*Pantia Penganugerahan Gelar Doktor Kehormatan Tan Sri Dato’ Utama Dr. Rais Yatim, Bidang Acara, Publikasi, dan Dokumentasi, www.unand.ac.id*, download at 12 January 2017, 14.20)

Based on the quote above, it can be assumed that Rais offers an idea to strengthen Malayness by remembering Minangkabauness. The impact of this offer may lead to weaken, even to forget Indonesianness. In other words, Rais’s offer may lead to the idea of *strengthening Malay, remembering Minangkabau, and forgetting Indonesia.*

**Conclusion**

Based on the analysis above, it can be concluded that playing with cultural norms, using other and Minangkabau by turn, the *perantau* ‘moved in and out’ of the position of an outsider and insider. By doing it they try to maximize their rights and privileges, that have given by the two cultural norms, so they can strengthen their position in the new community, while keeping their position in the old community. Moreover, the *perantau* tend to keep but modifying the *adat* in moving out and in their
“two homes”. In addition, the regulations from both “homes” have influenced in the way these *perantau* position themselves and be positioned by the other within “the two homes”. It is worthy to note that because of *pai marantau* is an activity that is encouraged by Minangkabau *Adat* for the survival of the *Adat* itself, the character of Minangkabau diaspora, seemingly, cannot be put into the two categories of diaspora theory.

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CONVERGENCE OF ISLAMIC ANIMAL ETHICS IN SUSTAINABLE LIVESTOCK PRODUCTION

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ABSTRACT

Livestock production is faced with sustainability challenges in meeting increasing consumer demand while at the same time ensure good animal welfare. Practices are conducted in livestock production to improve sustainability but it is insufficient since the religion based approach is rarely explored. This qualitative research explores principles of Islamic animal relating to practices in sustainable livestock production. The relationship between the principles and practices, and contribution towards sustainability in livestock production is highlighted. Findings from this research indicates that principles in Islamic animal ethics i.e. gentle (al-Rifq) and kind (al-Ihsan), animal in confinement (al-Habs), giving medical treatment (al-Ilaj), and providing sustenance (al-Infaq), and prohibition of torture and cruelty (al-Iza’) are in agreement with the actual practices perform by livestock farms. The relationship between principles and practices is indirect therefore the staffs have lack of awareness towards this issue. Finally, the role and contribution of Islamic animal ethics towards sustainable livestock production particularly in spiritual sustainability is highlighted by elaborating the concept of human’s vicegerent (khalifah), trust (amanah) and worship (ibadah). The three concepts may invoke sense of awareness and sensitivity thus increasing level of spirituality in human.

Keywords: Animal Ethics; Animal Welfare; Islamic ethics; Livestock Production; Sustainability.

1. INTRODUCTION

Human and animal interacts in multifaceted way. Animal are represented as deities in some culture, as symbol of the divine and act as companion. Animals also provide source for consumption, as a mean of transportation, protection and economic benefit to human. This implies that animals have diverse importance towards human and both are indissolubly connected not just in the form of physical but in spiritual level as well. Ironically, human tend to exploit the importance causing cruelty and suffering in animals throughout the ages.

In the context of livestock production, animals (such as cattle, lamb, chicken and swine) have

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undergone suffering in fulfilling the needs, wants and demands of human. Rapid population growth, urbanization and income growth has resulted in substantial increase in global demand for food from animal-source (Speedy, 2003). In meeting the demand, livestock productions have experienced advancement and intensification in its system to fulfil human needs. The advances include application of science in genetics, breeding, nutrition and disease control to improve productivity (Thornton, 2010). At the same time, current trend in livestock production results in transition from traditional family farming system into intensive production system and may have erode some of religious principle of compassion towards animals. The production system that is oriented towards productivity and profit maximization sometimes results in poor animal welfare. This can be because livestock animals are being farmed in high quantity to enhance productivity. Animal (such as poultry) is confine in specialized indoor environment with large quantity causing limited movement and freedom to express natural behavior.

The problem stated above infers that animal are being seen as commodities in intensive production system causing the animal to be treated as inanimate object. It can also be understood that the optimization of production and profitability eventually ignores other elements (spirituality) that are crucial for sustainability in livestock production (Shaharir b. M. Z, 2012). But in reality, animals are also living beings therefore, the question is do they not deserve good treatment as well? Serious concerns are given towards livestock production activities from scientist, policymakers and public. Over the past few years, various improvements have been made through multidisciplinary and interdisciplinary approach in improving the production and welfare of animals, yet it is still insufficient. This study will particularly tackle the concern by exploring the role of Islamic animal ethics towards sustainable livestock production. The researcher proposed that Islamic animal ethics have the underlying potential in enlightening the existing practices as it can offer more holistic insight in this issue.

2. THEOCENTRIC PERSPECTIVE ON ANIMALS

Theocentrism in an ethical theory founded from religious teachings. Many scholars view that religion and faith can provide strong basis towards animal protection. Hoffman and Sandelands (2005) recognize the capabilities of theocentric ethics in advocating harmonious relationship between human and animal. The authors stated: “We believe there is an alternative environmentalism that reaches beyond the political and religious debates between anthropocentrism and ecocentrism and, by so doing, offers clear and constructive ideas about our relationship to nature. This is an environmentalism centered on God, an environmentalism that is theocentric rather than anthropocentric or ecocentric”.

Theocentric ethical theory is referred as “God centered ethics”. This theory revolves around the concept that right or wrong deeds are based on God’s wills. In her book entitled Ethics from a Theocentric Perspective, Gustafson stated God is seen as divine entity that is so unique, the greatest, the most perfect, the Creator and the sustenance. Elizabeth Breuilly stated her concern that new ethical paradigm cannot resolve environmental dilemmas: “If we try to solve the ecological problem by introducing new ethical values or rearranging the importance of the traditional ones... we shall not go far in reaching a solution” (Breuilly & Palmer, 1992). Philosophers such as Gustafson are supports the ethical of theocentrism and critiques that biocentrism and anthropocentrism do not have strong basis or suitable values towards the animal.

Gustafson proposed that theocentric ethic prioritize in putting God as the supreme entity before human make any action or conduct moral activities such as in human-animal interaction. His approach on theocentric ethic are centred on acting according to God’s will. Gustafson stated:
“What is God enabling and requiring us to be and to do” (Gustafson, 1984). In this sense, it is important for human to think wisely and reflect upon their actions so that they do things that God permits.

Theories in animal ethics reflects varying view towards animal. The theory of anthropocentrism recalls that only human alone have intrinsic value, hence animals are valuable if and only if they can provide human with benefit. Pathocentrism theory holds the view that only higher-ranking organism such as human and primates can have moral values since they express pain and suffering. Ethical theory of biocentrism infers that all living organism has intrinsic value and do not draw distinction between one organism to another. Eco-centrical holism states that all organisms are interdependence among each other and functioning as a whole organism. Theocentric theory puts God as its foundation.

3. HUMAN-ANIMAL RELATIONSHIP FROM RELIGIOUS WORLDVIEW

There are varying perspectives on human-animal relationship in every religion worldview. Christian worldview reflects the biblical concept of God’s dominion over man and man dominion over animals (Szűcs, Geers, Jezierski, Sossidou, & Broom, 2012). The book of Genesis permit human to dominate and utilize animals for sustenance yet there are precepts that should be adhered such as responsibility, care and kindness. This is because kindness to animal is equated with the characteristic of God himself based on the Christian worldview (Szűcs et al., 2012). Likewise, Broom has stated that dominion over animal in reality infers human responsibility and obligation towards animals rather than exploitation alone (D. M. Broom, 2003).

However, there are opposing views regarding the dominion concept in Christian worldview. The opposing views from scholar such as Lynn White implies that dominion concept allow human to treat God’s creation as a mere resource to meet human end. According to White’s interpretation, God had planned all of his creation including animals “…explicitly for man's benefit and rule: no item in the physical creation had any purpose save to serve man's purposes.” (White, 1967) (p.1205). White claimed that the Christian worldview is the main cause for human exploitation of nature including animals. The study conducted by (Preece & Fraser, 2000) have proposed that Christian worldview regarding animal is complex, therefore other scholar including White may have misinterpret the message in Bible.

Islamic worldview describes that animals are believed to be worshipping God. Islam and Islam (2015) presented that human-animal relationship is part of social existence, an existence based on the fact that everything on earth worships the same God. The difference in terms of worshipping God between human and animal is that humans are given choice whereas animal do not have choice but to follow the commandment from God. A study by (Haque & Masri, 2011) have stated that animal possess personhood. This means that animal can communicate in their own language, are self-conscious, and have their own intelligence. Nevertheless, human capabilities in understanding animal language and intelligence are still limited because it is highly complex. Overall, animal have significant role in Islamic worldview from providing utility to human, being members in communities, as well as possessing their own language and intelligence.

Worldview of major religion reflects that human-animal relationship are closely binding not just in the form of physical but in spiritual level as well. Therefore, religion may act as an element in shaping ways human behave and interact with the animal. This present study will explore the ethical approach provided by Islam in ensuring the animal welfare.
4. SIGNIFICANCE OF ANIMALS IN ISLAM

According to Ziauddin Sardar’s principles, Islam underlines harmonious relationship between Allah SWT, human and all creations as reflected in the concept of “hablu min Allah wa hablu minannaš” (Mokhtar & Abdullah, 2014). Countless guidelines can be found from the Holy Qur’an and Hadith encouraging harmonious relationship between all creations, but the reality nowadays is somehow opposite. It can be noted that present Muslims are only partially aware of the teachings found Islamic tradition and are largely selective regarding the aspects that are known to them (Foltz, 2006). Some of the Islamic guidelines are being overlooked or simply abandoned in the present day. There are current practices that are not in accordance to Islamic teachings such as cruel handling of animal during transport and slaughtering process (Abdul Rahman, 2017).

Table 1: Significance of Animal in the Holy Quran

<table>
<thead>
<tr>
<th>Significance of Animals</th>
<th>Epistemological Evidences from the Holy Qur’an</th>
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<tbody>
<tr>
<td>Animal as name of chapter (surah) in the Holy Qur’an</td>
<td>The Cow (al-Baqarah), The Bee (al-Nahl), The Spider (al-Ankabut), The Ant (al-Naml), and The Elephant (al-Fil)</td>
</tr>
<tr>
<td>Animal as members of communities (ummah)</td>
<td>(Al-Quran, 95:4); (Al-Qur’an, 6:38).</td>
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<tr>
<td>Animal as signs of Divine</td>
<td>(Al-Qur’an, 16:79).</td>
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<tr>
<td>Animal as blessings for human</td>
<td>(Al-Qur’an, 16:5-8); (Al-Qur’an, 23:21-22).</td>
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<tr>
<td>Animal as companion</td>
<td>(Al-Qur’an, 18: 18).</td>
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</tbody>
</table>

Primary textual sources in Islam, Qur’an and Hadith, describes various significance of animal. According to analysis of these two primary sources, the significance of animal can be classified into two aspects that includes instrumental and intrinsic aspects (Mokhtar & Abdullah, 2014). Both of these aspects are indissolubly linked and should not be detached between one another to engage harmonious relationship between human, animal and Allah SWT. The instrumental aspects refer to animal utility value towards human such as food for consumption, transportation or even animal experimentation in biomedical research (Amanullah, 2012). As for intrinsic aspects, the significance of animal revolves around the value that animal may influence human spirituality. For example, seeing animal diversity as signs of divine may create reverence upon Allah SWT supremacy. The scenario infers that both human and animal have close interdependence and mutually benefit from each other. Therefore, human should avoid excessive exploitation and cause unjustifiable harm upon the animal as it can result in divine retribution.

5. ISLAMIC ANIMAL ETHICS CONCERNING LIVESTOCK PRODUCTION

The most fundamental role of human is to practice what is right and to prevent what is wrong according to Islamic teachings. As such, this approach should be assimilated in every aspect of life including human treatment towards animal. According to (Foltz, 2006), the position of animal welfare within Islamic teaching is exemplary. Comprehensive gleaning of prophetic traditions (hadith) reveal values and principles that are essential in human treatment towards the animal. Human as vicegerent (khalifah) on earth ought to understand thoroughly the values and principles so that they shall not treat animal according to their liking. This is because every human is accountable for every action that they inflict upon the animal either good or bad. When doing good thing, human may be given heavenly reward while bad actions can be condemned by God (Mokhtar & Abdullah, 2014). Islam has underlines numerous ethical principles in guiding human treatment towards animal. However, this study would only focus on discussing of five fundamental principles.
that are relevant concerning livestock production.

5.1 Gentle (al-Rifq) and kindness (al-Ihsan) approach

Animal ethics in Islam accentuate on gentleness (al-Rifq) and kindness (al-Ihsan) approach as described in the prophetic tradition (Mokhtar & Abdullah, 2014). In addition, it can also be understood that human beings are required to be compassionate with animal by treating them with love and affection. This approach is clearly explained in a hadith narrated Al-Bukhari that states “Those who are not loving, they will not be loved by God” and “Love to those living on earth, and you will be loved by those living in Heaven” (Al-Bukhari as cited in (Mokhtar & Abdullah, 2014)). The loving and compassionate approach should be shown towards animal as they are also God’s creation having their own feelings.

5.2 Duty and care for animal in confinement (al-Habs)

In Islamic viewpoint, confining (al-Habs) animal are permissible for the purpose of food production. Livestock animal are raised and confined within housing facilities in the farm and are monitored by human. However, the act of confining animal must comply with several conditions for example providing animal with safe and clean housing for animal. Prophet Muhammad (peace be upon him) has lay emphasis on keeping the animal habitat clean to the level where his followers could perform prayer at the site (Mokhtar & Abdullah, 2014). By keeping the housing clean, diseases and infection could also be prevented from infecting the animal.

5.3 Providing source for animal sustenance (al-Infaq)

The next principle discusses on ensuring animal have adequate source for their sustenance such as food and water. Prophet Muhammad (peace be upon him) says that “those who ride the animal and drink its milk should bear the cost for its sustenance” (Bukhari as cited in (Amanullah, 2012)). Hence, human beings should not deprived animal from food or water as it is strongly condemned in Islamic ethics since it causes God’s wrath. As narrated by Bukhari, a woman had imprisoned a cat and cause its death because she deprived it from food and water. She was punished to hell for imposing such preposterous act towards the cat (Abdelkader, 2014). If she had provided sustenance for the cat, she might be spared from punishment.

5.4 Prohibition of torture or mistreatment (al-Iza’)

As discussed above, Islamic principles advocates gentle and kindness approach towards animal. Hence, any act of torture or mistreatment is condemned in Islamic ethics. As explained by Rahman (2017), Prophet Muhammad (peace be upon him) condemned the act of beating, striking animal and marking animal on the face. Cruel practices such as notching and slitting of ears without purpose (wasm) are also prohibited.

5.5 Provide medical treatment (al-Ilaj)

The last principles centres on providing animal with medical treatment when needed. Providing medical towards animal is advocated by the four main schools (mazhab) in Islam as a sign to show kindness and affection towards animals (Mokhtar & Abdullah, 2014). Moreover, animals are also viewed as valuable resources and property (mal) for human to manage responsibly.

6. SUSTAINABILITY IN LIVESTOCK PRODUCTION

Livestock production is defined as domestication of animal for human purpose such as food, clothing or even for medical uses (Bellaver & Bellaver, 1999). Livestock animal such as cows,
goats, swine and poultry are raised in farm for home use or for profit (Bradford, 1999). In other words, livestock production play an important role in human activities since it contributes to household income, economic growth and development. Rapid population growth, urbanization and income growth results in increasing demand for livestock products in the form of meat, milk and eggs (Thornton, 2010). In meeting the growing demand, livestock production has undergone gradual changes in system, from traditional family farming system into intensive production system (Bellaver & Bellaver, 1999).

Animals are raise in large quantity in commercial farming would further increase its productivity yet such condition is accompanied by undesirable issues. Indoor housing may reduce animal freedom of movement and limits opportunity for them to express natural behaviour (Woods, 2012). Extensive use of performance enhancing methods are also prevalent in intensive production system. Intensive production system may enhance productivity but it is associated with animal welfare problems such as potentially causes disease transmission, limiting animal movement and undesirable ambient conditions.

Such conditions had raised ethical concern from scientist, policy makers and even consumers. Critical attention is directed towards livestock production requesting for improvement in animal welfare since 1960s (Woods, 2012). The movement was initiated by Ruth Harrison in Britain in her influential book so-called Animal Machines, Harrison criticized the unfavorable effects of intensive production and argues for rethinking of attitude and practices towards livestock animals (Harrison, 2013). As consequences, there were series of continuous debates and discussions in addressing the concern of the ethical treatment in livestock production to fit consumer’s expectation and provide transparency. For example, in the United Kingdom, Farm Animal Welfare Council (FAWC) was founded to improve regulations and develop guidelines to enhance animal welfare (Farm Animal Welfare Council, 1979). Table 1 shows the five guidelines developed by FAWC.

<table>
<thead>
<tr>
<th>Table 2: Five freedom concept develop by FAWC</th>
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<tbody>
<tr>
<td>Freedom from thirst, hunger and malnutrition</td>
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<tr>
<td>Freedom from thermal and physical discomfort</td>
</tr>
<tr>
<td>Freedom from pain, injury and disease</td>
</tr>
<tr>
<td>Freedom from fear and distress</td>
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<tr>
<td>Freedom to express normal behaviour</td>
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</table>

Webster (2016) states that five freedoms is comprehensive concept since it can identify and evaluate specific approaches taken to promote animal welfare. However, he later suggests that there are limitations to the concept as it only address the short-term consequences. From the aforementioned studies, it can be inferred that enhancement in livestock productivity should not outweigh concern for good animal welfare. This condition reflects that there is a need for sustainability and balance between these two elements. Therefore, in the next chapter we will focus on the issues and challenges in achieving the sustainable livestock production.

7. SUSTAINABLE LIVESTOCK PRODUCTION: ISSUES AND CHALLENGES

Livestock production is a complex and interrelated activity that involve, human, animal, natural resources and capital investment. All these elements are required to be utilized and managed in a sustainable manner to ensure that it does not result in unwanted impact. At its simplest, sustainable livestock production centres on balancing the “three pillars” that is economy, environmental and
social dimension. However, (Gomis, Guillén Parra, Hoffman, & McNulty, 2011) claimed that the three pillars model is imperfect as it allows trade-offs to occur. D. Broom (2016) has proposed several conditions that can make livestock production unsustainable namely poor animal welfare, inefficient use of resources and unacceptable genetic modification.

The main trade-offs issue that can be discussed is on the perception of the stakeholders on animal welfare. (Cardoso, Hötzel, Weary, Robbins, & von Keyserlingk, 2016). Stakeholders in livestock production comprise of farmers, producers, retailers and consumers or customers.

First: from a farmer perspective, they strongly believed that urban citizens are indifferent about agricultural practices, hence public or consumer perceptions on agriculture are not recognized (Cardoso et al., 2016).

Second: from a producer perspective, ensuring that the animal grows and complies with production goals as welfare-friendly systems such as protecting the farm animals from harsh or hot climate, access them to sufficient food and water and clinical health will increase the production costs (Borkfelt, Kondrup, Röcklinsberg, Bjørkdahl, & Gjerris, 2015). However, the producers need to comply with the degree to which “welfare-friendly” is perceived by the consumers.

Third: from retailer perspective, their willingness to pay more for welfare-friendly products depends on the customers purchasing behaviour. Consequently, if the level of concern of customers is low, the retailer also has low level willingness to pay more for the products (Miranda-de la Lama, Sepúlveda, Villarroel, & María, 2013). The purchasing behaviour is reflected during Spain financial crisis between 2006 and 2011.

Fourth: the consumer perspectives views that “ideal farm” centres on humane treatment towards animals by allowing them space to roam around and move. The health of animal is also a subject of concern by the consumers through “Clean, free of disease and good medical care” (Cardoso et al., 2016). “Good stockmanship” practices are imperative for livestock husbandry (Lyles & Calvo-Lorenzo, 2014). Thus, one needs to be knowledgeable about and practice all relevant aspects of stockmanship since consumers can demand from retail food companies that they use ethical production systems (D. Broom, 2016).

Another issue in sustainable livestock production concern with the notion of “unnecessary suffering”. The definition of unnecessary suffering as proposed by (Hurnik & Lehman, 1982) is act that insufficiently important without purposes. They propose to adopt another alternative practice that more humane in nature of which can result in less suffering to animals, and not too expensive for community to bear. This statement infers that one has to consider moral and economic aspects, which according to the legislators, acceptable suffering is suffering that is in practice unavoidable, impossible to prevent or prohibit, but possible to legally justify and hence an acceptance of all current farming practices. Therefore, the legislation standards of the countries are influenced by the cultural orientations and the traditions of its society. For example, in case of slaughtering in Islamic ritual, the animals are to be slaughtered in the best way, such as using a sharp knife to ensure the animal suffers as little pain as possible.

The issues of animal welfare livestock production are often conflicts with ideas of sustainability. Hence, there are four criteria are used to describe this situation (Lyles & Calvo-Lorenzo, 2014):

1) no definitive formulation of the problem exists;
2) the solution is not true or false but, rather, better or worse;
3) the stakeholders have radically different frames of reference about the problem;  
4) and the underlying cause-and-effect relationships are complex, systemic and either  
unknown or highly uncertain.

Lyles and Calvo-Lorenzo (2014) have also proposed several welfare concerns by public in poultry  
and cattle farming industries namely, the tendency to expose in extreme weathers, pain from  
routine husbandry practices, negative handling, transitional events such as transportation and  
rehoming, and modern biotechnologies. For example, the exposure to heat or cold stress or the  
combination of both affects the performance, health, reproduction and welfare of animal livestock.

Additionally, physical alteration on individual animal such as tail docking, beak trimming,  
castration, dehorning and branding, which they are associated with changes in pain-related  
physiological response variables and natural behavioral uncertainty due to discomfort feelings. For  
instance, there were studies indicate that the practice of tail docking has been shown to result in  
behavioral and physiological signs of distress, pain and evoke acute and sustained changes in  
peripheral mechanical sensitivity (Di Giminiani et al., 2017; Molony & Kent, 1997; Tom, Duncan,  
Widowski, Bateman, & Leslie, 2002). Beak trimming of older or adult hens, although it can  
prevent severe injuries caused by feather pecking and cannibalism, the procedure is nonetheless  
traumatic and has already been banned in a few European countries (Spindler, Giersberg,  
Andersson, & Kemper, 2016). It potentially causes the nociceptors in the beak stump show  
abnormal patterns of neural discharge, which indicate acute pain (Breward & Gentle, 1985).

Persistently, if the subjects of the negative and improper handling are not being control effectively,  
it may put animals and human handlers in the high risky situations such as various of calamities,  
injuries and even death.

The trend in meat consumption are highly influenced by income, price of meat and also the quality  
of the meat. (de Boer, Schösler, & Aiking, 2014) stated that the challenge for high-meat eating  
countries would be to resolve the amount of meat consumption. Consequently, (Vranken,  
Avermaete, Petalios, & Mathijs, 2014) suggest that uncontrolled and overconsumption in meat  
eating can lead to obesity, risk for disease. In this sense, sustainable meat or livestock production  
requires people to shift into small portion of meat eating to avoid over-consumption behavior and  
exaggeration.

To improve sustainability in livestock by production (Scholten, Boer, Gremmen, & Lokhorst, 2013)  
introduced the concept of “Livestock Farming with Care”. This approach is based in care ethics  
with four principles: 1) One Health (i.e. healthy and safe for animals and humans); 2) Customized  
Care (i.e. from the individual animal’s perspective and integrity); 3) No Nuisance (i.e. from an  
environmental and societal perspective) and 4) Credible Performance (i.e. from an economic and  
public prospect). However, their study concluded that livestock production is faced with challenges  
in relating between the ethical principles and managerial practices. This situation could be tackled  
by implementing interdisciplinary and trans disciplinary way of thinking and acting.

In addition, sustainability in livestock production inherently prioritized human-centered  
development and is focusses on maximizing efficiency such that neither the environment nor  
economic development is compromised (Yamini, 2016). Nature including animal are viewed as  
economic good and valuable not for itself but to the extent that it can sustain maximum capital  
growth (Yamini, 2016). According to (Shaharir b. M. Z, 2012), the extremities and maximization in  
existing concept of sustainability can be countered with religious and spiritual values such as  
moderation. In this sense, sustainable livestock production perhaps requires the inclusion religious
elements to improve its current state. Religion based approach can address the problem in comprehensive and holistic way by explaining the interrelation between animal, human and God. However, it has to be noted that limited studies are found in exploring the role of religion within sustainable livestock production.

8. **RECONCILING LIVESTOCK PRODUCTION PRACTICES WITH PRINCIPLES IN ISLAMIC ANIMAL ETHICS**

The findings gathered from case study indicates that the ethical principles have already been translated into actual practices. In fact, most of practices being performed are inherently in line with the ethical principles advocated by Islam. Although it is already in agreement, the researcher would like to highlight the underlying relationship between these principles and practices that are seldom discussed. By understanding the essential relationship between these two elements, its potential contribution towards sustainable production can be presented clearly.

8.1 **Underlying and indirect relationship between principles and practices**

At first sight, the role of Islamic animal ethics in livestock production is somehow insignificant for the reason that the staffs have lack of sensitivity and awareness towards the subject. The staffs in charge did not realize universal role of religion within livestock production because their primary concern is towards improving their productivity. Such concern is undeniably important in livestock production, however it should not outweigh other elements as well. For livestock production to be sustainable, it has to consider several important elements in both tangible and intangible form. This means that sustainable production requires a balance and moderate interaction between physical, economical, science-knowledge and religio-spiritual elements as discussed by (Shaharir b. M. Z, 2012).

Based on the study, it was found that the spiritual elements in livestock production are regularly being overlooked and ignored. Perhaps such situations occur because of the materialistic and instrumentalist worldview that dominates contemporary Muslim thinking and behaviour. This worldview may result in excessive exploitation and unsustainability as it only focusses on the physical or material elements. According to this worldview, human beings are allowed to manipulate and utilized animal based on their liking in order to achieve economic productivity. Any undesirable practices may be viewed as acceptable as long as they can increase their production.

In reality, we live in an interconnected world. The production activity or practices itself cannot solely focus on the material or instrumental approach. Although livestock production primarily focusses on fulfilling consumers demand and generate income, they should prevent mistreatment towards the animal. Ethical values and principles from religious teaching such as inhibiting manipulation towards animal should be taken into consideration. Elements of religio-spirituality are needed to sustain and balance the condition. It also works as basis of paradigm shift in transforming current worldview of mechanistic or instrumental into holistic to move towards sustainability. This can be achieved through multidisciplinary approach such as the inclusion of religious principles. In that sense, sustainable livestock production with good economic productivity and animal welfare should be harmonized with values and principles advocated by Islam.

Islamic worldview is known with its universality and holistic approach towards resolving issues and dilemma including livestock production. The values and principles such as moderation (wasattiyah) and sufficiency (zuhd) are essential in effort towards sustainability in livestock production. However, (Al-Jayyousi, 2017) articulates that harmonizing Islamic values and principles with the contemporary instrumental worldview can be challenging. Perhaps, the situation is due to the fact that there is widespread crisis of values dominating the contemporary world. (Al-Jayyousi, 2017) proposed the need to re-examine and reflect upon the foundation of current
practices understanding the values underpin in Islamic worldview. The discussion above infers that Islamic values are in fact integral but the role is often being ignored and overlooked. Thus as a Muslim, the researcher suggest that Islamic values should be understand and assimilated in every aspects of life including livestock production.

8.2 Lack of spiritual-religious mindfulness in staff working at livestock farm

According to Islamic worldview, human is portrayed as *khalifah* with a mandate to make sure all resources are utilized in a reasonable, equitable and sustainable manner. Hence, human activity is provided with transcendent dimension where it becomes sacred, meaningful and purpose-centered (Al-Jayyousi, 2017). In livestock production, the role of staff in taking care and providing animal with respective needs apparently reflects this approach. Nevertheless, the staff at the farm are only partially aware of this essential approach. This condition supports the work of (Foltz, 2006) and (Islam & Islam, 2015) where the authors concluded that Muslims are unaware of their role and its association with animal well-being.

From the case study, most practices implemented by the staffs are inherently in line with the principles in Islamic teachings. It can also be understood that the practices being performed are also a form of worship (*ibadah*). In Islam, the concept of *ibadah* is comprehensive and holistic. This is means that it is not limited to ritual religious performance but also in socio-economic activities (Kamali, 2016). For instance, the ethical principles advocates human to do good towards animal such as being gentle and providing food and shelter. In livestock production, when the staff follows such principles it can be inferred that they are also performing *ibadah*. This condition may improve the relationship between human, animal and God while at the same time enhance human level of spirituality. Besides that, it can also act as motivation and inflict sense of purpose for each task being performed by the staffs. The staff sensitivity towards enhancing the animal welfare may also be heightened.

The concept of accountability (*amanah*) can also be highlighted in explaining the relationship between the ethical principles and practices in livestock production. Although Islamic animal ethics only provide general guiding principles, it apparently has a huge role in governing human treatment towards animals. As described in the concept of *khalifah*, human beings are given trust and mandate in ensuring that all God’s creation on earth including animal to be managed and utilized in proper and sustainable manner. Hence, humans are provided with guidelines to follow and comply with in preventing unwanted mischief and corruption (*fasad*). This concept of *amanah* links together the principles and practices in livestock production. This study has shown that there are parallel consistencies and the Islamic ethical principles and practices performed by the farms. In livestock farm, the staff are implementing their usual responsibility at work but what underlies it is that they are also indirectly performing their *amanah* towards their religion. This essential relationship can instill awareness and sensitivity in the staff thus provide meaningful purpose for every practice being done.
9. A CONCLUDING REFLECTION

Islamic ethical principles serve as guidelines for governing human treatment towards animal. The principles are extracted from primary textual sources in Islam. Islamic ethics underline approaches such as gentle (al-Rifq) and kind (ihsan) towards animal, providing animal with food, water and shelter (infaq), and prohibition of mistreatment and cruelty (al-Iza). The ethical principles also highlight on providing animal in confinement (al-Habs) housing or shelter that is safe and clean to prevent diseases or unwanted threat. Since the principles are originated from divine sources it could provide holistic approach relating to sustainable livestock production. Ethical principle in Islam links together physical and spiritual aspects tha is fundamental to sustainability. The holistic concept may fill in the gap of mainstream sustainability as it only addresses the instrumental aspects such as economic, environment and social. In practical-reality, livestock farms in Malaysia implement many practices to sustain their production and ensuring good animal welfare. Although the practices are largely viewed as norm in livestock production, there are intrinsic values and relationship that underpin the practices. The indirect relationship the ethical principles and practices in livestock production should be understand clearly in creating a harmonious society.

The relationship between principles in Islamic animal ethics with practices in sustainable livestock production is indirect. At first glance, role of Islamic animal ethics in livestock production seems insignificant for the reason that the staffs have lack of sensitivity and awareness on the subject. The relationship between the principles and practices are often being overlooked in the contemporary setting. The staff prime concern is towards enhancing the production, yet it has to be noted that such concern should not outweigh other element as well. Focusing on production alone is insufficient as it may cause unsustainability. Productivity is a physical gain rooted in materialism therefore it could encourage unwanted consequences such as excessive manipulation towards the

Figure 1: An Islamic-based Sustainable Livestock Production Realm Circle
animal. This scenario is prevalent in contemporary setting because economic activity including livestock production is dominated by instrumental worldview.

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INTERACTION OF ERGONOMIC WORK SYSTEM TOWARD OCCUPATIONAL SAFETY AND HEALTH PERFORMANCE

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ABSTRACT
Several studies had shown the low workers performance occurred due to OSH related aspects such as occurrences accidents, absenteeism, higher level of sickness and stress at work. The persistence of this situation will lead to the downsizing of organizations productivity and profit. Many factors had influence the increasing of OSH problems. This study examines the interaction factor of Ergonomic Work System (EWS) toward OSH performance among production workers. Two hundred and ninety-five respondents from several printing companies in Malaysia were analysed through distributed questionnaires. Higher work demand contributes to worker’s stress and accidents that leads to absenteeism problem. Sickness problem confirmed result in influencing absent issues. Moreover, study found there is an interaction between workplace support and individual age towards occupational stress among those when they are older. In addition, there is interaction between sensorial demand and physical health status toward occupational stress at work. In other words, higher sensorial demand at work will exhibit higher occupational stress among those workers when they have low levels of physical health status. Therefore, changes related in practicing Human Resource Management (HRM) aspect especially on OSH factors at work such as balancing working hours, altering work condition and environment, enforcing ergonomic aspects, implementing OSH training and safety culture, will help to ensure worker’s safety and health performance. This eventually will lead to a better working environment and improve worker’s performance that contributes to the part of sustainability of good working environment in the world. Future research and limitations of the study is discussed.

Keywords: Ergonomic Work System, OSH Performance, Printing Industry

1. INTRODUCTION

Work performance can be improved by aligning what the workers need from their work environment with what is supplied by the workplace. Workers’ performance refers to
people’s best abilities in performing a job or task (Heathfield, 2011) and is related to the
behavioural outcome of the individual (Grant & Parker, 2009). In other words, workers’
performance is also considered as workers’ outcome, which refers to the consequences of
individual performance (Sabine & Michael, 2002). Therefore, it is necessary to promote
and maintain the highest degree of physical, mental, and social well-being of individuals in
all occupations to ensure their performance at work (Archer, Borthwick & Tepe, 2009).

Overlooking the importance of maintaining workers’ health and social well-being at
work will lead to numerous problems to both the individuals as well as the organization.
Specifically, this may lead to a loss of workers’ talents and a decrease in organizational
performance. Further to this, organizations with the greatest health problems, poor
facilities, environmental problems as well as poor working environments will see a decline
in their employees’ work performance (Ismail, Rani, Makhbul, Ghani, Nuawi, & Zulkifli,
2008; Leigh, 1991), adding over time to organizational costs. It is clear that further
discussion on the issues is needed, with the aim of answering whether task factor leads to
OSH performance in Malaysian printing companies?

According to balance theory, task factors are psychosocial work factors which fall
into task elements, such as job demand, job control, and job content (Smith & Carayon,
1989). In this study, task factors refer to task demand factors, as outlined by Carayon
(2009), which concern three elements referring to quantitative demand (the quantities and
capacities that workers will encounter while doing their work), sensorial demand (the
concentration and sense of workers in their work activities), and emotional demand (the
emotions and feelings of workers while conducting their work). On the other hand, OSH
performance refers to the several dimensions which presenting the issues of OSH at work.
There included occupational accident, occupational stress, sickness and absenteeism.

Based on the currently available literature, little effort has been spent clarifying the
concept of OSH performance in the workplace (Sabine & Michael, 2002; Ahmadon et al.,
2006). It is important to show that OSH issues actually convey significant insight into
humanitarian considerations, financial costs, and legal sanctions (Bateman, King, & Lewis,
1994). This study examines the interaction factor of Ergonomic Work System (EWS)

2. METHODOLOGY

The research population was considered to be all the workers in printing companies in
Malaysia. The total number of workers in printing companies in Malaysia is 47,102
employees (DOSM, 2006) in 3162 printing companies that have registered with the Home
Affairs Ministry of Malaysia (2002). The lists of printing companies were obtained from
the Registrar of Companies (ROC) and Malaysian Printers Association (MPA).

In the current study, production line workers in Malaysian printing companies were
used as the unit of analysis for studying OSH performance. In addition, this study used
probability sampling, which refers to those populations that have a known opportunity of
being chosen as subjects in the sample (Sekaran, 2000). Besides, Leary (1995) indicates
that a stratified random sample will typically reflect the characteristics of the population as
a whole. Previous studies have used stratified random sampling to avoid biases in the
estimation of the proportion (Chow, Mohd-Yusuf, Anita, Syed-Tajudin, et al., 2012;
Ketola, Toivonen, Hakkanen, Luukkonen, et al., 2002). To be specific, the current study
conducted using stratified random sampling that assists in estimating the population parameters and identifying the subgroup of elements within the population. Thus, for the purpose of this study, the list of employees provided by the Human Resource Department of each printing company.

A set of questionnaires was created to determine the relationship between EWS toward OSH performance. Moreover, this study adapted certain approaches to suit the context of the study. This means that several elements from other studies were utilized to assist the researcher in measuring variables in the current study. Furthermore, the five-point Likert scale was used to measure every item in the questionnaire.

Measuring occupational accidents in the workplace requires respondents being honest about whether they have experienced any accidents while performing their work. A previous study revealed that some individuals and organizations fail to report accidents (Nikolaos, 2010). In the current study, different scales were used for three different statements designed to measure occupational accidents. For example, the statement “Rate the severity of the impact of an accident at work that you experienced in the last six months” measured the severity of accidents experienced by workers. In addition, in measuring sickness among workers, several items were adopted from Zafir et al. (2008) to measure workers’ health. Sickness concerned several conditions such as the physical, physiological, and psychological (Zafir et al., 2008). The average Cronbach’s alpha of .60, for these items, was deemed suitable for measuring sickness in this study.

Moreover, there are four items regarding absenteeism were presented. Absenteeism focuses on the attitude of employees who do not attend to work for several possible reasons. In this study indicated that workers fail to attend work because of personal problems, family problems, and organizational problems and due to no valid reason. These problems interfere with workers’ feelings at work, and severely preoccupied them. Another dimension was to measure are occupational stress. In measuring occupational stress, this study defines occupational stress as work-related stress (role ambiguity, role conflict, perceived workload, and interpersonal conflict) and psychological strain (job dissatisfaction, anxiety, frustration, and depression) that is measured through self-reporting. Therefore, the best way to measure occupational stress is by combining several items from previous studies related to occupational stress. Jex et al. (1992) used this combination in their study on testing the effect of using the actual word ‘stress’ in the measurement of self-reported occupational stress and strain. Fourteen items adopted from Jex et al. (1992) were suitable for the current study to measure occupational stress and were used in the questionnaire.

Furthermore, task factors refer to the demand placed on workers while doing their jobs. According to Carayon and Smith (2000), task factors are categorized as quantitative demands, sensorial demands, and emotional demands, all of which can affect workers’ performance as well as their health and safety. This study adapted the approach from the Copenhagen Psychosocial Questionnaire (COPSOQ). This was used in several studies including one by Matthias et al. (2006), which looked at psychological stress at work. However, in the current study only three task demands were used, those being quantitative demand, sensorial demand, and emotional demand. Previous studies have reported that focus on these three demands is sufficient for measuring overall task demands in manufacturing industries, and therefore is deemed suitable for the current study. Besides that, these demands are typically used to measure task demands that are experienced by
individuals at work (Carayon & Smith, 2000).

Individual factors refer to several daily activities and background information of individuals as workers in the printing companies. Items related to health status were used frequently in the present study, which aim to measure workers’ health status. In addition, individual factors also encompass as demographic characteristics such as age, level of education, and the length of service which respondents was asked to provide these details in the last section of the questionnaire. At the last in measuring EWS refers to organization factors which used several indicators, such as self-involvement, knowledge base, managerial support, employee support, and strain put on the worker, adopted from Matthews et al. (2011).

3. RESULTS AND DISCUSSION

Four hundred twenty out of 500 sets of questionnaires were returned, representing a 84% response rate. Referring on the age of respondents, fewer than 2% of those involved in the study were below 20 years of age, with the youngest respondent aged 17. Meanwhile, about 6% of respondents were aged 51 or older, with the oldest respondent aged 58. The mean age was 35.34 years (SD = 8.93). The majority of respondents were in the 31 to 40 years age group (36.3%), followed by those in the 21 to 30 years age group (35.6%). Twenty point seven percent of respondents were aged between 41 and 50. The participants in this study were over whelming male with a rate of 87.5% (n = 258), compared to females at 12% (n = 37).

After several process of analysis has done, study concluded that there is a significant relationship between EWS and OSH performance. Moreover, study also found that there is an interaction between indicators of EWS which has supported the hypothesis of study.

The results showed there were significant positive associations between quantity demands and occupational stress (r = .50, p = .00). Occupational Stress - The EWS factors significantly predicted occupational stress and explained 33% of the variance in occupational stress. The overall regression model was significant, R² = .33, F (7,287) = 20.83, p < .001. Specifically quantity demands (β = .51, p = .00) is positively significant towards occupational stress. Specifically, quantitative demand found positively significant towards occupational stress. It is clear that increasing the number of tasks assigned to workers can result in increased stress, leading to poor health. This finding is consistent with past studies, which reported that an overload of work increases worker’s stress (Ahsan et al., 2009; Alexandros et al., 2003; Al-Aameri, 2003; Chan et al., 2000; Edimansyah, 2008; Jalaluddin, 2007; Manshor, Fontaine & Choy, 2003; Reason & Hobb, 2003; Salleh et al., 2008; Yahaya et al., 2009; Yahaya et al., 2010).

The results showed there were significant positive associations between quantity demands and sickness (r = .24, p = .00). Sickness - The overall regression model was significant, R² = .10, F (7,287) = 4.5, p < .001. The quantity demands showed a significant positive relationship to sickness (β = .24, p = .00). The result regarding the amount of task attributed to workers probability to sickness which argued that the amount of work demands, relate to the amount of burden that would affect individual physically and mentally. This result is similar to that found in other studies, which reported that sickness among workers is elevated when the burden of tasks at work is increased (Shaliza et al.,
As mentioned by Morgan et al. 1976, workers sickness is associated to organisation’s failure to distribute a suitable amount of workload to the workers. This adversity eventually affects worker behaviour and levels of productivity (Fahrenbeg, 1995; Manusson & Pope, 1998).

Refer to the occupational accident aspect, the results showed there were significant positive associations between quantity demands and occupational accident (r = .22, p = .00). Occupational accident shows that the overall regression model was significant, R² = .12, F (7,287) = 5.66, p < .001. Quantity demands has found to be positively significant toward occupational accident (β = .18, p = .00). Workers with many tasks and need to complete within a short period time prone to involve accident (Fabiano et al., 2010; Mansor, Zakaria & Abdullah, 2012; Saad et al., 2012; Zakaria et al., 2012). Furthermore, the results showed there were significant positive associations between quantity demands and absenteeism (r = .17, p = .00). The overall regression model was significant, R² = .06, F (7,287) = 2.82, p < .001. Quantity demands (β = .19, p = .00), was positively significant towards absenteeism. This finding is consistent with previous studies, which reported that task demands cause tiredness, frustration, and a feeling of being overwhelmed, which can lead to worker’s absenteeism (Harrison & Martopcio, 1998; Luz & Green, 1997; Nelson & Quick, 2008). The result of study also concluded that higher work demand contributes to worker’s stress and accidents that leads to absenteeism problem. Sickness problem confirmed result in influencing absent issues.

Looking on the result of an interaction of EWS dimension, these study focused on the two dimensions, which were predicted to interact most with other dimensions. These were sensorial demands and workplace support, which were analysed in relation to occupational stress and sickness to measure their interaction effects. Sensorial demands was chosen for obvious reasons as it had yielded no significant results, while workplace support was chosen as it involved organization factors variables such as self-involvement, employee supportiveness and commonly used in participatory ergonomic studies. It was thus felt to be worthy of consideration due to recent implementations of the principles of participatory ergonomic at work. In addition, physical health status was presented as individual factors to test the interaction effect of EWS dimensions.

Study found there is an interaction between workplace support and individual age towards occupational stress among those when they are older. The overall regression Model 1 of the interaction effect of workplace support and EWS dimensions on occupational stress was significant R² = .33, F (3,291) = 23.43, p < .000. The interaction relationship between workplace support and age towards occupational stress (β = 1.15, p = .00, t = -.28) is found as significant. The plotted graph in Figure 1.1 shows that high level of workplace support will exhibit a lower level of occupational stress among those operators that are older. This refers to workplace support affecting an individual’s level of occupational stress with regard to their age, in other words, there are an interaction between workplace support and individual age towards occupational stress such that high level of workplace support will exhibit a low level of occupational stress among those when they are older. This means that those who have a high level of workplace support will reveal less occupational stress depending on their maturity. This result consistent as propose of model work system by Smith and Carayon (1989) and the latest argument by Carayon (2009) indicated that individual factor were interact to organisational factor and task factor to generate good performance.
Figure 1.1 The interaction of workplace support and age on occupational stress

Referring to other interaction, result shows that there is a significant interaction between sensorial demands and physical health status towards occupational stress. The overall regression was $\Delta R^2 = .03$, $F(3, 291) = 4.143$, $p < .000$. There is a significant interaction of sensorial demands and physical health ($\beta = -.97$, $p = .00$, $t = .24$) status towards occupational stress. Plotted against a multiple line graph (Figure 1.2), it is found higher sensorial demands at work would exhibit higher occupational stress among those that have lower levels of physical health status.

Figure 1.2 The interaction of sensorial demands and
In the printing companies shows an importance for the each tasks to proper observe. This is because most printing tasks need the constant attention of those people carrying them out. Thus, a good physical condition contributes to tasks being successful completed in the workplace. Otherwise, workers easily engage with problem such as stress at work. Mikkelsen et al. (1999) found a significant interaction between the effects of demand, decision authority, and learning opportunities toward health. Decision authority and learning opportunities had specific and independent impact on subjective health and psychological functioning, which is particularly important to change working life and to increase workers flexibility in the organisation. Thus, the balancing sensorial demands on the task work could enhance stress and eventually increase level of health of workers.

4. CONCLUSION

This study hopes to impart an understanding of the practical implementation of OSH at the workplace in the Malaysian context. In Malaysia, priority should be given to evaluating the applications of OSH in the workplace, as this is still rare. This could help managers in organizing work processes and assist them in making good decisions on work-related issues. Furthermore, the findings of this study may provide insights leading to improvements at the workplace by reducing workloads, introducing good shift work arrangements, providing participatory ergonomics programs, ensuring good health practices, and creating good relationships between supervisors and employees. More specifically, the interaction between these factors could provide input to the organization in order for it to come out with good work plans and work arrangements.

Therefore, changes related in practicing Human Resource Management (HRM) aspect especially on OSH factors at work such as balancing working hours, altering work condition and environment, enforcing ergonomic aspects, implementing OSH training and safety culture, will help to ensure worker’s safety and health performance. This eventually will lead to a better working environment and improve worker’s performance that contributes to the part of sustainability of good working environment in the world.

Hence, several limitation of study could be given consideration in order to enhance a good of conducting future study. The involvement of several industries, having a large sample study, and the more objective measures of study would offer inputs that are more valuable and outcomes that can be used to improve the development of research field. Moreover, result concern related behavioural aspect which attention should be given on the developing behavioural intervention in order to enhance worker’s knowledge, attitude, and skill while performing their work.

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ABSTRACT

This qualitative study focuses on the users’ behaviour change upon the evolution of iPhone technology with the purposes to identify the users’ awareness of the evolutionary changes of iPhone technology and to determine whether users exhibit any tendency of new behaviours in tandem to such change. The obtained data were based on the semi-structured interviews, conducted upon twenty informants using the non-probability sampling technique, of which the informants were selected based on the convenience of accessibility and proximity to the researcher and the informant must meet a set of fulfillments, including being an iPhone user and had used at least one application on their iPhone devices. The results indicated that users keep aware and loyal to iPhone product; users buy a new iPhone product whenever there is significant technological change on its physical features and the applications; users share opinion towards the changing and improving of iPhone technology; users responds towards the changes that signify an evolutionary change of iPhones technology, users show positive and negative behaviours’ change in tandem to the evolution of iPhone technology, and users disclose personal responses. As a conclusion, iPhone users have somehow created new patterns of behaviour in tandem by the technological change in iPhone, hence affecting their social life positively and negatively.

Keywords: Awareness; Behaviour; Evolutionary; iPhone; Technology

1. INTRODUCTION

Smart phones are now capable of acting as standalone computer devices that its functions are more than usual and beyond the box. It can take pictures, search the internet, send emails and text messages, in addition to just making phone calls (Centertech, 2014), such as one of the famed smart phone products in this era are iPhone by Apple. Nowadays, technology has become the only tool which able to change the world, especially in meeting the life's satisfaction. According to ITEA (1996) technology is actually human innovation in action where it basically engages in the generation of knowledge in order to develop a system of problem solving and to expand human capabilities. It shows that technology affects almost every angle of human life.
In the past decades, technology has transformed the way how humans communicate to each other. Beginning with the Internet, mailing letters in a digital way, such as e-mails through Gmail or Windows Live Hotmail allow the 'digital letters' are received at the same point of time they were sent (Deleo, 2008). Greeting cards have also been a digital trend, sent over the Web and cutting short the trips to the post office. It is all free and save time as we experiencing it. However, despite all the technological advancement, it has changed our lives completely and change could bring to the bad side of it. Despite the user-friendliness of the technology, it tends to make communication dragged out more than it has to and sometimes due to time constraint, people get too obsessed with shortening the writing. To date, the Y Generation has largely forgotten how to spell and write complete sentences due to the increased use of shortened version of text messaging on smart phones (Deleo, 2008).

According to previous research, users who use the new technology can communicate with anyone at anytime from anywhere. They have the freedom to develop friendship with anyone they want. As a result, some of them tend to breach the freedom given and being out of control. For example, girls, especially, have recently been found lost. After further investigation, they were actually having left their homes and disappeared together with their new boyfriends (Tsang, 2014). It seems like smart phone nowadays bring humans to the cheapest standard as well. It shows that those who are obsessed with new technology will tend to lie or even play tricky behaviour while communicating. These kind of people who actually bear in mind that they 'will try to do as much as they can to minimise the extent to which they are asked about their technology use' by keeping it a secret and will be kept among themselves (Woollaston, 2014). It shows that people nowadays become more secretive and defensive about their life and dare to argue with parents or family merely just to keep their secrets within. Additionally, people who are addicted to smart phone, especially iPhone may potentially avoid or even could ignore the real-life activities, particularly when it comes to family-time activities.

In light of these facts and information, there are no specific facts about using behaviour of iPhone users in selected areas in Shah Alam, Malaysia. Therefore, this study was designed purposely to gain more information and understanding on the perception towards the evolution of the iPhone, especially in terms of its technological change and its effects to the young adults' using behaviour of the iPhone.

2. Voluntary participation.
The primary questions of the semi-structured interview linked to user’s behavioural change in regards to the evolution of iPhone technology is as follows:

1. Do you aware about any changes in iPhone technology?
2. Are you a loyal of iPhone product and can you justify your stand for being loyal to iPhone product?
3. Do you buy a new iPhone product whenever there is significant technology changing on its physical features as well as the application?
4. Do you realize that the technology of iPhone product keeps on changing and improving from time to time and can you explain why it changed?
5. Do you aware that the changes signify an evolutionary change of iPhone
technology and how do you respond in regards to the changes?

6. Do you experience any behavioural change in tandem with the evolution of iPhone technology and can you please elaborate those behavioural changes?

(For instance: changes in social interaction, personality, personal exposure, etc.)

The results of the interviews would be made up of opinions, observations, behavioral and also related experiences of the selected informants regarding the iPhone. To be fair, the researchers should not take side to any informants and not in the position to be judgmental towards the topic in accumulating whether the opinions are right or wrong.

3. RESULTS AND DISCUSSION

3.1 Users' Awareness About The Evolutionary Change Of iPhone Technology

The majority of the informants agreed that they are aware about the evolutionary changes in the iPhone, especially in terms of the operating system (iOS). They believed that the applications and the iOS are much on user-friendly and more convenient to use, especially in terms of the software, accessibility, spotlight search, syncing system and as such that could drive the informants to become a loyal user of the iPhone.

Some informants agreed that the uniqueness of the design is actually the factor to drive them to keep aware and become a loyal user. They believed that the design is way better than other smart phones and it always brings the logo-signature of Apple on the product, within the glance of onlookers. iPhone owns a very simple yet classy shape that is not too big or small to be held on an average hand-palm. They believed that the design is much simpler, lighter and thinner compared to other smart phones. Some informants also noticed that the iPhone is a durable product as compared to others, especially in terms of its software and battery life span.

3.2 Users' Intention To Buy A New iPhone Product Whenever There Are Significant Technological Changes On Its Physical Features And Software Applications

Some informants agreed that the physical features of the iPhone are the main factor to drive them to meet the purchase intention. The very lighter, thinner and compact shape has influenced informants to stay with the product up to model upgrading intention. They believed that there is no relationship between technology and physical features. According to Herman (2014), new technologies are something that can be related to creating new behaviors, especially in generating physical environments which allow technology to work for humanity. In facts, the changes occurred when people keep demanding for a unique shape, easy going and friendly product. It means that, they would buy it whenever the product gives them a feeling of comforting to be with. There was once that the iPhone came out with a very different shape and it is believed that it can be recognized from afar as compared to other smart phones, which are quite difficult to be identified. Thus, the intention of the purchase is dependent to the difference of the shapes offered.

Most of the informants agreed that the applications offered by iPhone have driven their intention to purchase the product. They believed that some of the applications are incompatible with any other smart phones. Such applications are VSCO Cam apps, Hyper Laps apps, iCloud, iTunes and synchronizing system among the Apple products. Many
informants give high regards towards the iPhone's camera. They believed that iPhone latest camera somehow has become more superb and able to produce good imagery with virtually real coloration at high definition.

This is clearly shown by the users' knowledge about innovation and the changes offered by the upcoming model of an iPhone with an upgraded version of IOS and some other applications that only can be downloaded in the new model of the iPhone even though they are still using the old version of the product. Most of them agreed that what makes iPhone unique is the iOS which cannot be found in any other smart phones over Android or Windows platforms. The informants further explained that the iOS has kept on upgrading starting from iOS 1.0 up to the beta version of iOS 8.4. They believed that the iPhone is one of the products which is very concerned on the advancement of technology as it is kept improving the technological loopholes to better the system. This trending has driven users to keep following up the updates about new changes in iPhone.

3.3 Users' Opinions Toward The Changing And Improving Of iPhone Technology: From Technological Advancement's and Competition Phenomenon's Perspectives

Almost all informants believed that the changing and improving on iPhone technology occurred as the smart phone technology becomes cheaper and affordable to all people. Everyone is running towards the advancement of the technology because it is believed that the more advanced the technology of a product (iPhone), the more secure it gets. For instance, starting from iPhone 5c and 5s, the technology of fingerprint sensor or Touch ID sensor is introduced to unlock the phone, shows that the iPhone becomes more secure because it can only be accessed by the owner of the phone. The technology keeps on changing and upgrading to attract people to stay advanced with the technology. It is believed that the iPhone has also done the same to keep people loyal to their products. iPhone developed an outstanding and unique operating system (iOS). iOS is basically interrelated with the user interface designed mainly with touch-screen input. It is purposely designed to make it easier and much friendlier to use. To date, the advancement of the iPhone is still incompatible with other smart phones in the market due to this sustained uniqueness.

Some informants agreed that phenomenon of competition among the smart phone brands is also one of the reasons why the technology of iPhone keeps on changing and improving. As of today, the smart phone market race is being dominated by two operating systems' platforms; iOS and Android. Even though there are many smart phone brands introduced in the market, yet iPhone still dominates others. Kleinnman (2015) asserted that heading towards 2015, iOS and Android will keep on competing.

3.4 Users' Response Upon iPhone Technological Changes: Intention To Buy or 'Just Nice To Aware'

As previously highlighted, every informant is aware of the evolutionary changes of iPhone technology. However, it depends on the users whether they respond with the intention to buy or merely as their self-awareness. The average of the informants said that they will continuously follow the evolutionary changes of iPhone, especially in terms of the
upgrading of the operating system (iOS) and anything about the latest model of iPhone.

It can be said that, all the informants were positively aware of the evolutionary changes of iPhone technology, but not all responded by buying intention; they somehow take it as a mere self-awareness. In fact, one of the informant claimed that she is totally aware with the changes but declare no buying intention.

The technological change, especially in iPhone's applications has made users become more satisfied with the product and force them to update their smart phone whenever the operating system is updated and up to purchase intention merely to meet their desire. It is believed that the iPhone’s improvement in technology is enough to persuade users, particularly to describe iPhone as the best thing Apple has ever created. That is why there is always a dream of a user to have a new model of the iPhone even though they cannot afford to have it. There is an optimistic response from the users due to their loyalty to the iPhone. They believed that the iPhone has a very outstanding and excellent technology, incomparable to others. Therefore, it can be considered that, iPhone users would always have a positive response towards the technological change in the product regardless of what models they are using.

3.5 Users’ Tendencies To Positive Behavioural Change Due To The Evolution Of iPhone Technology

Due to the evolution of iPhone technology, all the informants agreed that they exhibit a tendency to be more loyal towards a thing in life, including in relationship. It is believed that it has changed the way how they behave in their daily life. Previous research has defined that behavior change's interference delivered through technological devices is now becoming as usual matter (Little, Bell & Defeyte, 2013)

iPhone drives people to become loyal to the product and it is very hard to find iPhone users who have the intention of brand change. Most prefers to remain with the iPhone, even with a new product brand is launched.

One of the informant claimed that the iPhone drives them to become creative, especially in terms of editing, taking pictures and many creative activities. It is believed that the iPhone comes out with a very superb light-exposure and colour imagery which allow users to keep editing their pictures to become more attractive.

Users seem to appreciate things they have and in a better way have applied it to the daily life. It is shown that the iPhone has the power of making people become more admired towards what they possess. In a way, iPhone drives users to become more creative through iPhone photography with the fantastic evolution of the iPhone camera, to the extent that more and more professional photographers have actually ventured into this field of imagery. Zibreg (2015) stated that the development of some amazing iPhone photography applications, this art has become more and more accessible to the public, to the point that nowadays, virtually everyone can be an artist and create amazing photographs with just an iPhone.

3.6 Users' Tendencies To Negative Behavioural Change Due To The Evolution Of iPhone Technology
A few informants agreed that the iPhone is more likely to create the tendency in changing their behaviors. They tend to feel proud of owning or the feeling of they think they are better than others since they are using iPhone. Four informants claimed that they have a tendency to become conceited by owning the iPhone.

iPhone is also able to drive people to start ignoring the surrounding. This is because users tend to focus more on their phone rather than concerning with what is happening around them. They are more likely to posit in their own world, even being surrounded by the buzz of the crowds. Ryan (2014) asserts that there are about 26 per cent of all pileups and 1.3 million accidents were caused by drivers busy using cell phones while on the road. They tend to continue talking and looking at gadgets or smartphones while driving, which resulted in many people suffer injuries every year in accidents, all due to distraction by those irresponsible drivers (Gorman, 2014).

iPhone users also admit that sometimes they have a tendency to become obsessive and willing to be with the phone all day long, to the extent of feeling stressed up if the phone is out of battery. It is believed that they cannot live a day without swiping their phone screen and become addicted to it (iPhone). This behaviour has somehow affected their daily life routine. According to Jim (2014), the evolution of technologies of the last decade has come out with bad decision making, more immediate, more rushing and more widely consequential, which resulted in bad finalization. Technology depresses people to think and deliberate things emotionally for instance, with anger, fear, or the need for approvals.

3.7 Disclosure Of Users' Personal Responses

There are significant numbers of informant said that the iPhone has a proud symbol in communities. It is believed that the iPhone can be a symbol of wealth once a person is using an iPhone. That is why they are very proud to use iPhone as their mobile phones. It is even been proved that owning an iPhone is a wildly popular status symbol for urban youth (Wolonick, 2013). The informants believed that this may change the way how society look at them, and will differ the users among others.

4. CONCLUSION

It is concluded that all iPhone users have awareness towards the evolutionary changes of iPhone technology, particularly in the operating system (iOS) and the application offered by the iPhone. The users responded upon the iPhone technological change, but differs in intention, whether to buy the product or taking it merely as self-awareness. The users exhibit some tendencies of new behaviour due to evolutionary change of the iPhone. Considerably, it is more on negative behaviour rather than the positive ones. Positively, it is believed that the iPhone has encouraged users to become more loyal towards a thing and value it with a high sense of appreciation. Negatively, it has encouraged the users to feel overly conceited by owning an iPhone in front of the non-owners and becoming ignorant of their surroundings; more focused on what is offered on the phone's screen than on what the real life has to offer. Through the cross tabulation analysis, the users have disclosed their personal responses towards the iPhone. Most believed that iPhone has made a high degree status symbol in itself. People who use the iPhone is considered that the person is educated and brand conscious person as well. Thus, the entire stigma has somehow been...
created and believed by the iPhone users. That is how they come out with their own views that a person can simply change their behaviours once they use an iPhone.

All in all, iPhone users have somehow created a new pattern of behaviour in tandem with the evolution of iPhone technology. The users will keep on placing their awareness towards the evolutionary changes in iPhone technology by updating about such change, hence significantly responding to it by their actions. The conceited feeling appears whenever a person starts to use iPhone as there is a stigma that the iPhone is always seen as a product for the wealthy. Through this pride of owning an iPhone, it keeps the users loyal to the product once he or she starts to use an iPhone. Due to technological uniqueness and compatibility issues, most of the users insist on using the iPhone and do not take the hassles of unlearning and relearning new technologies by opting other smart phone brands. The users get too used to the nuts and bolts of iPhones and will always have the urge to upgrade to the latest versions, just to satisfy the feeling of being the most advanced person there is. As there are new brands of smart phone on offer, the users keep on waiting for what could the iPhone offer in comparison, in a continuous competition phenomenon. As such, the users of smart phones will outrun each other in a race to be always current in any smart phone technological advancement.

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6. REFERENCES


CONSTITUTIONALITY GOVERNMENT REGULATION IN LIEU OF LAW NUMBER 2 OF 2017 ON CIVIL SOCIETY ORGANIZATION REVIEWED FROM THE 1945 CONSTITUTE AND THE CONCEPT OF STATE LAW

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Abstract
This research is a normative study that is perscriptive in order to provide solutions to the problems of Civil Society Organizations in Indonesia. The problem in this study is how the arrangement and mechanism of the dissolution of CSOs in Indonesia’s Laws. And How about the Constitutionality of Article 61 and 62 of Government Regulation In Lieu Of Law No. 2 of 2017 which regulates the Dissolution of CSOs if reviewed from the 1945 Constitution and the Rule of Law’s Concept. While Article 61 and 62 of Government Regulation In Lieu Of Law No. 2 of 2017 authorize the Government to dissolve CSOs without any due process of law in advance. This is certainly contrary to the concept of Rule of law which put forward the existence of restrictions on power and the freedom of association that guaranteed in the 1945 Constitution. As a result of the research can be concluded that Article 61 and 62 of Perppu No. 2 of 2017 which gives authority to the government to dissolve CSOs unilaterally is Inconstitutional because Contrary to Article 1 paragraph 3 of Indonesia as a State of Law and Article 28 E paragraph 3 concerning freedom of association. And also there needs to be a revision of Government Regulation In Lieu Of Law No. 2 of 2017 with still giving authority to the Judicial Boards (MA or MK) in deciding the dissolution of CSOs. It is also necessary to limit the time to the Judicial Boards in deciding cases of the dissolution of CSOs, to avoid an uncertain case and an inefficient time.

Keywords: Government Regulation in Lieu of Law, Freedom of Association, State of Law.

I. Introduction
A. Background
Dissolution of Hizbut Tahrir Indonesia (HTI) by Indonesia’s Government gave birth controversial in the society. The dissolution was based on Government Regulation in Lieu of Law Number 2 of 2017 that amended the provisions for Civil Society Organization’s dismissal regulated in Act Number 17 Year 2013 on Civil Society Organizations. The Government Regulation in Lieu of Law gave the government great authority, and took over the power for Civil Society Organization’s dismissal which previously belonged to the Judicial Power. While the freedom of association is a human right that is protecting the right of every individual to collaborate with others to form an organization and also protect the freedom of the
The issuance of Government Regulation in Lieu of Law Number 2 of 2017 by Jokowi Government seems to show the Government's dictatorship which took over the authority for dissolution of Organizations from judicial power to executive power. Government Regulation in Lieu of Law Number 2 of 2017 gives fear to CSOs because they can be disbanded at any time and the leader or members can be subjected to criminal sanctions. It is like negating the right to freedom of association guaranteed by our Constitution.

In general, civil society organizations in Indonesia are regulated through Law No. 17 of 2013 civil society organizations. Article 61 of Law Number 17 Year 2013 states that sanctions against civil society organizations are conducted in tiered form from written warnings, termination of grants, temporary suspension for activities, and revocation of registered certificates or legal entity status. Regarding Sanctions for the dissolution of the CSOs, it is stipulated in Article 68 that "the revocation of the status of civil society organizations’s legal body shall be imposed after the decision of a court that obtained a permanent legal force." In this regulation, the dissolution of a Civil Society Organizations can only be made after a court decision achieved permanent legal force. The aim is to prevent government in dissolving Civil Society Organizations arbitrarily. However, in Government Regulation in Lieu of Law Number 2 of 2017 eliminates these mechanism. This can be seen in Articles 61 and 62 Government Regulation in Lieu of Law Number 2 of 2017. Article 62 paragraph 2 states "The minister and minister who administers government affairs in the field of law and human rights in accordance with the authority revoke the status of legal entity." Which is then affirmed in Article 82, Revocation means a dissolution of Civil Society Organization.

The provisions indicate that the Government takes over all authority in dissolution of Civil Society Organization. The consequence is that the dissolution of Civil Society Organization may be based solely on government’s political decisions that depend heavily on political considerations. This can give negative impact for the climate of freedom of association and assembly in Indonesia.

As known Government Regulation in Lieu of Law is made to encountered the needs in actual legal necessity. Government Regulation in Lieu of Law may be made to protect human rights including the right to associate that guaranteed in the constitution and to protect the entire nation in facing emergency condition. Because of that the birth of Government Regulation in Lieu of Law Number 2 of 2017 should be questioned. Is the issuance of the Government Regulation in Lieu of Law has met the requirements of "emergency" that became legitimacy in issuing that Government

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156 Indonesia, *Undang-Undang tentang Organisasi Masyarakat, UU Nomor 17 Tahun 2013, LN Nomor 116 Tahun 2013, TLN nomor 5430*. Ps. 69.

Regulation in Lieu of Law.
Constitutional Court as the interpreter of Constitution through Decision Number 138 / PUU-VII / 2009, interpreted crucial urgency phrase in Article 22 of the 1945 Constitution with the following three conditions:
1. The existence of circumstances is an urgent need to solve legal problems quickly based on the law;
2. The required legislation is not available so there is a legal vacuum, or there is a law but is inadequate;
3. The void of the law can not be overcome by making the law in a normal procedure because it will take a long time while the urgent circumstances need certainty to be resolved.  

B. Problem Formulation
Based on this background, it is necessary to study more about the Constitutionality of Government Regulation in Lieu of Law No. 2 of 2017 on CSOs in terms of the 1945 Constitution and the Theory of State Law. The problems formulation in this research are:
1. How is the Dissolution of Civil Society Organizations regulated in Indonesian Regulations?
2. How is the Constitutionality of Article 62 of Government Regulation in Lieu of Law No. 2 of 2017 on the Dissolution of Civil Society Organizations in terms of the 1945 Constitution and the Concept of Legal State?

C. Research Methods
This research is normative juridical, ie research by examining secondary data. The typology of this research is prescriptive analysis. It means to describe a condition of the research object and then analyzed it based on legal theory or applicable law. Legal materials which are used are secondary data classified as Primary Legal Material consisting of the Constitution of 1945 (UUD 1945), Act number. 12 Year 2011 on the Establishment of Laws and Regulations, Act number. 8 Year 1985 on Civil Society Organizations, Act number 17 Year 2013 on Civil Society Organizations, and Government Law of Lieu Number. 2 Year 2017.
Secondary legal materials are materials that provide explanations about primary legal materials. In this study, secondary legal materials to be used are books, legal research reports, scientific articles, dissertations. Tertiary legal substances are materials that provide guidance and explanation of primary and secondary legal materials such as encyclopedias and legal dictionaries.


I. The Result of Research

A. Adjustment about Civil Society Organization’s Dissolution in Indonesian Legislation

Indonesia as a State law, protection of Human Rights is a necessity. Human rights are the rights that human beings have because of their existence as human beings. Human beings have it not because it is given by society, the State, or based on the positive law but solely on the basis of their human dignity.\textsuperscript{160} It is inherent with Natural Right’s Theory by John Locke. In his book Two Treatises of Government, he stated that "All individuals are endowed with nature, the right to life, liberty and property, which is their own and can not be removed or revoked by the State." \textsuperscript{161}

In regard to the freedom of assembly and association is affirmed in Article 20 of the UN Charter, known as the Universal Declaration of Human Rights. Article 20 (1) of the Universal Declaration of Human Rights states that "everyone has the rights to freedom of peaceful assembly and association" verse (2) "No one may be compelled to belong to an association."\textsuperscript{162} Furthermore, article 22 of International Covenant on Civil and Political Rights (ICCPR) as ratified in Act Number 12 Year 2005 which guarantees the right for everyone to have freedom of association.\textsuperscript{163}

Indonesia’s Constitution has legitimated the freedom of assembly and association. It can be seen in Article 28 E Paragraph (3) which states that "everyone is entitled to freedom of association, assembly and expression." Freedom of association is a form of expression, opinion and aspiration toward ideas shared with people who have the same paradigm. In the 1945 Constitution, the right to freedom of thought, opinion, attitude, and conscience is firmly guaranteed by Article 28E Paragraph (2). This Article states "Everyone has the right to freedom of belief, expression of thought and attitude, according to his conscience."

From that explanation, freedom of association and freedom of expression are interconnected with each other or interdependent. The principle of freedom expression will automatically be paralyzed, if there is no guarantee of the right to assemble and associate. On the other hand, freedom of assembly and association is also meaningless, if freedom of thought and freedom of expression is not guaranteed properly. Because the essence of organization is to bring out visionary ideas, opinions and thoughts to advance the organization. The loss of one of these rights can be likened to a rigid body left behind by the spirit.

Freedom of association and assembly is not included to non-derogable rights, but derogable rights. Although these rights may be reduced, The reduction may only be existed if the use of those rights creates harm and violates the others people’s rights.\textsuperscript{164}

\textsuperscript{160} Satya Arinanto, et al., ed. Hukum Hak Asasi Manusia, (Yogyakarta: Pusat Studi Hak Asasi Manusia UII, 2008), pages. 11.

\textsuperscript{161} John Locke, Two Treatises of Government (London: Everyman, 1993), pages. 9.


\textsuperscript{163} Indonesia, Undang-undang Pengesahan International Covenant on Civil and Political Rights, UU Nomor 12 Tahun 2005, LN Tahun 2005 Nomor 119, TLN 4558. Ps. 22.

\textsuperscript{164} Muhamad Alim, Demokrasi dan Hak Asasi Manusia dalam Konstitusi Madinah dan UUD 1945, (Yogyakarta: UII Press, 2001), hlm. 19.
In the context of Indonesia, the reduction of the right of association and assembly can be happened if it threat the NKRI, causing conflict in society, propagating hatred among fellow citizens of Indonesia as stipulated in Article 28 J (1) “Everyone shall respect the other’s human rights in orderly life of society, nation, and state.” Verse 2 “In using its rights and freedoms, each person shall obey to the restrictions set by law with sole intent of ensuring the recognition and respect of the rights and freedoms of the others and to satisfy fair demands in accordance with moral judgment, religious values, security, and public order in a democratic society.”

Even though the Civil Society Organization can be dissolved, the procedure of dissolution must be democratic. The government should not monopolize authority in dissolving a Civil Society Organization by negating the role of judicial power, so the Government will tend to be authoritarian. The consequence of an authoritarian Government, then the law that is born will be repressive and prioritize the interests of the ruler than people.\textsuperscript{165}

The Mechanism of Dissolution Civil Society Organization in the Laws and Regulations in Indonesia:

1. Dissolution of CSOs Based on Act Number 8 Year 1985 On Civil Society Organization

In Act Number 8 Year 1985 criteria of an organization can be frozen, regulated in Article 13, Article 14, and Article 15. Article 13 of Law Number 8 Year 1985 states that an organization can be frozen its management if the organization:\textsuperscript{166}
   a. Conduct activities that interfere with security and public order;
   b. Receive foreign assistance without government approval;
   c. Providing assistance to foreign parties that harm the interests of the nation and the State.

The meaning about disturbing public order is described further in Article 19 of Government Regulation Number 18 of 1986:\textsuperscript{167}
   a. Propogate tribal, religious, racial, and intergroup hostilities;
   b. Divide the unity of nation;
   c. Inhibit the implementation of development programs;
   d. Other activities that could disrupt political stability and security.

The stages to frezz an organization must go through the following stages:
1) Conduct a warning letter twice, with a grace period between the first and second reprimands are 10 days;
2) If, after reaching a period of 1 month through a reprimand, the organization have not responded, the Government / Regional Government shall summon the board to be


\textsuperscript{166} Indonesia, Undang-Undang tentang Organisasi Masyarakat, UU Nomor 8 Tahun 1985, LN Nomor 44 Tahun 1985, TLN nomor 3298. Ps. 13.

\textsuperscript{167} Indonesia, Peraturan Pemerintah tentang Peraturan Pelaksana UU Nomor 8 Tahun 1985 Organisasi Masyarakat, PP Nomor 18 Tahun 1986. Ps. 18.
questioned;
3) If by a summon, the organization has not fulfilled the call for questioning, the Government / Local Government have authority to freeze the organizations;
4) Before freezing an Organization, according to the level of government, the Government shall require consideration to Supreme Court for the national scale organization. While the regional organization is through the consideration of the Ministry of Home Affairs.

In the New Order period, there was a necessity and obligation for every organization by using Pancasila, as a Sole Principle, if there was an organization that did not use Pancasila as a Principle in the Organization, the Organization could be dissolved by the New Order Government. At least there are five main things that can make a civil society organizations was dissolved unilaterally by the Government. First, if a civil society organization does not include Pancasila as the principle in its articles of association. Second, if it is considered disturbing public order. Third, when receiving assistance from foreign parties that harm the nation’s interest. Fourth, receive foreign assistance without government approval. Fifth, develop and spread the ideology of Communism, Marxism-Leninism, as well as other ideology that is against the Pancasila.

These five things lead to dissolution without any judicial process. Where this such dissolution, open a faucet to government's arbitrariness, which threatens freedom of association and assembly.

Dissolution of CSOs Based on Act Number 17 of 2013 On Civil Society Organization

The Constitution guarantees to every individual or group of people to agree to bind themselves to an organization to achieve their interests. The reform era that has taken place since 1997, has opened up opportunities for relations between civil society and the country that undergo in such rapid transformation. This is shown by symptoms that indicate a strong role of civil society in organizing their self to fight for their interests when dealing with the State. The euphoria reflects the climax of freedom of conscience and freedom of thought that has been fought in the reform era.168

After Reformation, the dynamics of CSOs development and the changes in the system of government brought a new paradigm in the governance of community organizations in the life of society, nation, and state. The growth of CSOs with all its complexities requires more comprehensive legal management and regulation, since Act Number 8 Year 1985 about Civil Society Organization is not compatible with the needs and dynamics in community life, nation, and state. This is what lies behind the birth of Act Number. 17 of 2013 on Civil Society Organization.

In Act Number. 17 of 2013, besides containing general provisions on CSOs, it also contains about the prohibition and sanctions for CSOs. The prohibition against CSOs is stipulated in Article 59, which explains that a CSOs is prohibited from taking hostile action against tribe, religion, race and class. They also may not commit violent acts that interfere with public order and tranquility, including destructive acts. Separatist acts that threaten the sovereignty of the Unitary Republic of Indonesia, and activities that are the duty and

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authority of law enforcement. In addition to these restrictions, CSOs are also prohibited from accepting donations from any party that is in conflict with legislation, raising funds for political parties, and embracing, developing and disseminating ideologies that conflict with Pancasila.\textsuperscript{169}

There are some interesting things, when viewed from the Act Number. 17 of 2013 compared with Act Number. 8 of 1985. One of the obvious differences between two Acts are if Article 13 of Law Number 8 Year 1985, CSOs is prohibited from receiving foreign assistance without Government approval, while Article 56 paragraph 3 of Law Number 17 Year 2013, CSOs are prohibited from receiving assistance from anyone if contradictory with legislation’s rules. The rules in Act Number. 17 of 2013 are more presenting the rule of law, compared to Law No. 8 of 1985 which is based on government approval that is more inclined to approaches and political interests. Because of that Act Number. 17 of 2013 is closer to achieve the State’s ideals which, according to Aristotle, is to achieve the best life possible which can be achieved by the rule of law.\textsuperscript{170}

The Sanctions for CSOs in Act Number 17 Year 2013 are regulated in Articles 60 to Article 82. Among them are dissolution. The local government in this Act could stop the activities of CSOs. This Act states that CSOs can be dissolved through several stages, namely administrative sanction consisting of written warning, termination of assistance, suspension of activities, and revocation of registered certificate or revocation of legal entity status.\textsuperscript{171} Written warning is done for three times. In Article 64 mentioned if in the third warning letter is ignored, the government may terminate the funding and temporarily prohibit their activities for six months. With the notes, if the CSOs are on a national scale, there should be a consideration of the Supreme Court. However, if up to 14 days there is no reply from the Court, the government has the authority to suspend their activities. In Article 68, if the CSOs are still in action when they have been suspended, the government may revoke the status of their legal entity, with the condition, the Government get the approval from the court.

Sanction and Dissolution of Social Organization in Act Number. 17 of 2013 adheres to a tiered sanction system. The authority to dissolve the CSOs based on the decision of the Court. The government can not dissolve a CSO without a court decision. This mechanism as an important instrument that plays a role in democracy as a manifestation of freedom of association. Freezing and dissolution should be decided through a due process of law by an independent court. This process becomes very important, and does not let the authority for dissolution monopolized by executive power that will lead to arbitrariness as happened in the New Order.

3. Dissolution of CSOs Based on Perppu No. 2 Year 2017 About Civil Society Organization

Government Regulation in Lieu of Law (Perppu) Number 2 Year 2017 on

\textsuperscript{169} Indonesia, Undang-Undang tentang Organisasi Masyarakat, UU Nomor 17 Tahun 2013, LN Nomor 116 Tahun 2013, TLN nomor 5430. Ps. 56.


\textsuperscript{171} Indonesia, Undang-Undang tentang Organisasi Masyarakat, UU Nomor 17 Tahun 2013, LN Nomor 116 Tahun 2013, TLN nomor 5430. Ps. 61.
Amendment of Act Number 17 Year 2013 on Civil Society Organizations, signed by President Joko Widodo on July 10, 2017. In the consideration of the Act is stated that there is a legal vacuum because the 4 year old Act has not been regulated comprehensively about the Organization that is contradictory to Pancasila and the Constitution of the Republic of Indonesia Year 1945.\textsuperscript{172}

In Government Regulation in Lieu of Law No. 2 of 2017, there are 5 articles in previous Act which is amended and there are 18 chapters deleted. 5 articles in Law Number 17 Year 2013 on CSOs amended by the Perppu namely Articles 1, 59, 60, 61 and 62.

Article 1 in this Government Regulation in Lieu of Law changing the meaning of organizations becomes more assertive than ever. According to this Government Regulation in Lieu of Law, mass organizations have a sense:

"Social Organizations hereinafter referred to as CSOs are organizations established and formed by the community voluntarily based on the similarity of aspirations, wills, needs, interests, activities and ideals to participate in development in order to achieve the ideal of the Unitary State of the Republic of Indonesia based on Pancasila and the Constitution of the State Republic of Indonesia Year 1945."\textsuperscript{173}

Definitions of CSO in the Government Regulation in Lieu of Law become more assertive if previously in Act Number. 17 of 2013 reads CSOs are organizations established and formed by the community voluntarily based on similarity aspirations, wills, needs, interests, activities, and objectives to participate in development for the achievement of goals The Unitary State of the Republic of Indonesia based on Pancasila. Now affirmed with "and the Constitution of the State of the Republic of Indonesia Year 1945." It means that organizations must obey the 1945 Constitution.

The Government Regulation in Lieu of Law number 2 of 2017 stipulates that CSOs are prohibited from hostile actions against tribes, religions, races or classes; perpetuating, defrauding, or blasphemy of religion embraced in Indonesia; commit violent acts, disturb public order or tranquility, or damage public facilities and social facilities; and perform activities which are the duty and authority of law enforcement. CSOs are also prohibited from carrying out separative activity that threatens the sovereignty of the Unitary State of the Republic of Indonesia, and / or embraces, develops, and disseminates ideologies or understandings that are contrary to Pancasila.

This Government Regulation in Lieu of Law contains two kinds of sanctions namely administrative and criminal sanctions. Administrative sanctions as referred to this Government Regulation in Lieu of Law, consist of: a. Written warning; b. Termination of activities; and / or c. Revocation of registered certificate or revocation of legal entity status.

Article 62 stipulates a written warning, in this Government Regulation in Lieu of Law explained, shall be issued only 1 (one) time within a period of 7 (seven) working days from the date of issuance of the warning. In the event that CSOs do not obey the


written warning within the period referred to, the Minister and the minister that held legal affairs in the field of law and human rights in accordance with their authority impose sanctions for termination of activities. The regulation in This Government Regulation in Lieu of Law Number 2 0f 2017 simplified the order of sanctions and shortened the duration of sanctions compared to Act No. 17 of 2013.

If the CSO does not comply the sanction of termination of activity as intended, then according to Article 62 Verse (2) in this Government Regulation in Lieu of Law Number 2 0f 2017, the Minister and the minister holding legal affairs in the field of law and human rights based on their authority revoke the registered certificate or revoke the legal entity status. The Revocation of CSO’s legal body status as referred to Article 80A, shall be declared dissolved based on Government Regulation in Lieu of Law Number 2 0f 2017.

The criminal provisions in the Government Regulation in Lieu of Law Number 2 0f 2017 are contained in Article 82 A that any person who becomes a member and / or administrator of a CSO intentionally and directly or indirectly violates the provisions in Article 59 paragraph (3) letter c and letter d, is convicted with the minimum criminal prison 6 (six) months and maximum 1 (one) year. Violations in article 59 verse 3 points c and d are: committing acts of violence, undertaking public order and tranquility, or damaging public facilities and social facilities; and perform activities which are the duty and authority of law enforcement in accordance with the law.

In addition, any person who becomes a member and / or organizer of a CSO that intentionally and directly or indirectly violates the provisions in Article 59 paragraph (3) a, and b, and paragraph (4) shall be punished for lifetime imprisonment or the shortest punishment is 5 (five) years and a maximum is 20 (twenty) years. Violations of Article 59 verse (3) a, and b are: conduct hostile acts against tribe, religion, race or class; abuse, defamation, or blasphemy of religion held in Indonesia.

There are several substances in this Government in Lieu of Law that give controversial in the community are about criminal sanctions and the dissolution of mass organizations. Article 62, verse 3, grants full authority to Executive Power to revoke the legal entity of the Organization, which in Article 80 A is defined as the dissolution of CSO. This substance is very subjective, very rubber article, and gives absolute authority to the government to give interpretation, legal verdict, and revoke and dissolve without any judicial mechanism.

The authority of dissolution CSO that is centralized in the Executive power will bear the machtsstaat not the law state. Whereas in the concept of State law, the administration of governmental power is not centralized. The state law (rechtstaat) itself is characterized by the limitation of executive power. Therefore, in the next subchapter, will be discussed the constitutionality of Government in Lieu of Law


175 Indonesia, Perppu tentang Organisasi Masyarakat, Perppu Nomor 2 Tahun 2017, LN Nomor 138 Tahun 2017, TLN nomor 6084. Ps. 80A.

176 Indonesia, Perppu tentang Organisasi Masyarakat, Perppu Nomor 2 Tahun 2017, LN Nomor 138 Tahun 2017, TLN nomor 6084. Ps. 82A.

177 Jimly Asshiddiqie, Pengantar Ilmu Hukum Tata Negara, (Jakarta: PT. Rajagrafindo Persada, 2010), hlm. 281.
B. Constitutionality of Government in Lieuw of Law No. 2 of 2017 on CSOs viewed from the 1945 Constitution and the Theory of the State of Law.

The establishment of Government in Lieuw of Law is entirely decided by 1945 Constitution, in Article 22 verse (1) 1945 Constitution stated, "In the case of crucial matters, the President shall be enacted Government in Lieuw of Law." The constitutional of Government in Lieuw of Law’s enactment is an emergency or in cases of crucial urgings which implies a limitation of the a quo powers that to enact Government in Lieuw of Law, President should not be arbitrary, there must be a matter of crucial urgency. The term of crucial urgency is a difficult condition, important and sometimes crucial, unpredictable situation, and should be dealt quickly by formulating a legislation that has same level as the act, without an approval from the House of Representatives. When it is viewed from emergency state law’s theories, it is mentioned that the forced crunch as referred to Article 22 of the 1945 Constitution emphasize on the aspect of legal necessity or urgency related to limited time.

Completing the understanding of Government Lieuw of Law’s issuance, in its material terms mentions a crunching force, the Constitutional Court as the interpreter of the Constitution through Decision Number 138 / PUU-VII / 2009, interprets crunching force’s phrase in Article 22 of the 1945 Constitution with the following three conditions:

1. There is an urgent need to solve legal problems quickly based on the Act;
2. The needed Act is not available so there is a legal vacuum, or there is a Act but it is inadequate
3. The void of the law can not be overcome by making the law in a normal procedure because it will take a long time while the urgent circumstances need to be resolved immediately.

Then what about Government in Lieuw of Law Number. 2 of 2017 about civil society organization?. In procedural aspect, There is no problem with this Government in Lieuw of Law. The issuance of the Perppu is accordance with the terms of the Perppu issuance based on the interpretation of the Constitutional Court against "crunching force". In Act Number. 17 of 2013 on Civil Society Organizations, the Dissolution of a CSO may take many years from the stages of written warning until dissolution of CSO based on a court decision that has permanent legal force. Of course the mechanism is not very effective, especially in the dissolution of a Civil Society Organization that threat the sovereignty of Indonesia.

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178 Indonesia, Undang-undang Dasar Negara Republik Indonesia Tahun 1945, Ps. 22 ayat (1).
180 Jimly Asshiddiqie, Menuju Negara Hukum yang Demokratis, (Jakarta: PT Bhuana Ilmu Populer, 2009), hlm. 12.
the Unitary State of the Republic of Indonesia. Such as a Civil Society Organization that have carried out hostile actions such as speeches, statements, aspirations that produce hatred for the others group and community.

However in substantially there are several Articles in Perppu No. 2 of 2017 when it is viewed from the 1945 Constitution is unconstitutional. Article 61 and Article 62 of Perppu No. 2 of 2017 allow the government to revoke the status of legal body of CSO without preceded by Judicial process. The denial of due process of law in the dissolution of CSO will surely lead the government to a dictatorial Government. This is contrary to Article 1 verse 3 of the 1945 Constitution “Indonesia is a State Law.” One of the characteristics of a State law is limitation of power in the exercise of state power. As Julius Stahl mentioned, a State may be called a State law should include four essential elements, Human Rights Protection, distribution of power, Governing by Law, State Administrative Court. A. V. Dicey also mentioned three important features of "The Rule of Law": Supremacy of Law, Equality before the Law, Due Process of Law.

Because of that, the provision of CSO’s Dissolution in Article 61 Government in Lieuw of Law No. 2 of 2017 is a step backward because it eliminates the due process of law, and the distribution of power, in which the executive monopolizes all mechanisms in the dissolution of a CSO. The regulation is of course contrary to the concept of the State law mentioned by Stahl and Dicey. The limitation of power is absolutely necessary, because if the power centered and concentrated in the hands of one person will lead to arbitrariness and tendend to suppress the rights of the people. Lord Acton, an English historian, as quoted by Miriam Budiardjo as saying "power tends to corrupt, but absolute power corrupt absolutely”.

CSOs is an important instrument that plays a role in democracy and as a form of freedom of association. Freezing and dissolution of CSO must be decided through due process of law mechanism by an independent court. This legal process becomes very important, because the dissolution that can be done by the executive itself will cause arbitrariness as happened in the New Order government and the Old Order. The government is also expected to be able to freeze and disband the CSOs without evidence, witnesses, and a fair and balanced process. This is certainly contrary to Article 28 E verse 3 which states that “every person has the right to freedom of association, assembly, and expression.” The government should not monopolize authority in dissolving a Civil Society Organization by negating the role of judicial power, because it can make Government will tend to be authoritarian. The consequence of an authoritarian Government, then the law that is born will be repressive and prioritize the interests of the ruler than a people.

The sense of justice in the expression of freedom of association, through organizing activities can be created by the institution who have an authority to examine, adjudicate, and decide the sanctions to be frozen or dissolved is a judicial power not executive power. It is supposed to The Government in Lieuw of Law No. 2 Year 2017 still contains a mechanism of dissolution of CSOs by Judiciary in this case the Judiciary under the

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Supreme Court.

To solve the problem of inefficiency due to the length of time required in the dissolution of a CSO. It can be solved by shorten the stages of the dissolution of CSOs such as providing time limits to the Judiciary in examining, hearing, and deciding cases of dissolution of CSOs. If in Act No. 17 of 2013 stated that the court is given 60 days to give a decision, in a Perppu can be shortened to 30 days. That way is wiser and provide solutions to the government's worry that if CSO’s dissolution involving the judiciary power will take a long time. The mechanism also reflects a State Law that adheres to the principle of due process of law, and there is no a monopoly of power in the dissolution of CSOs.

The second alternative is that the authority to dissolve the CSOs can be given to the Constitutional Court. The 1945 Constitution provides legitimated the right and freedom of association and assembly. Since freedom of association is a constitutional right of citizens guaranteed by the 1945 Constitution. Toward the deviation of this constitutional rights, the Constitutional Court may give a decision on such deviations, because the Constitutional Court as the interpreter and the guardian of constitution.185

Of course this second alternative, also can be applied in the dissolution of CSOs. The judicial process in Constitutional Court is shorter than Judiciary process under the Supreme Court which has first-class legal action, appeal, cassation, and judicial review. Whereas the Constitutional Court decisions are final and binding and there shall no be legal effort after this decision, and the parties shall abide and obey the verdict. This alternative of course can solve the problem which worried by the Government where the process of judicial can take a long time.

The granting of authority for the dissolution of CSOs to Constitutional Court because the Constitutional Court is established to ensure that the constitution as the supreme law can be upheld properly.186 The objective of the Constitutional Court is to guard and ensure that the constitutional norms are not disregarded in the administration of the state,187 including the norms that guarantee freedom of assembly and association contained in Article 28 E Paragraph 3.

III. Close
A. Conclusion

The right and freedom of association and assembly is one of the derivations of civil and political rights, namely the rights of the classical human. Recognition of the right and freedom of assembly and association is affirmed in Article 20 of the UN Charter, known as the Universal Declaration of Human Rights. It is also affirmed by Constitution 1945 Article 28 E paragraph (3) stating that "everyone is entitled to freedom of association, assembly and expression." The Dissolution of CSOs in Laws and Regulations is contained in Law No. 8 of 1985, Law No. 18 of 2013, and the latest Perppu No. 2 of 2017. In Law No. 8 of 1985, CSOs can be

187 Hamdan Zoelva, Mengawal Konstitusionalisme, (Jakarta: Konstitusi Press, 2016), hlm. 94.
dissolved unilaterally by the Government. In Law Number 18 Year 2013, CSOs can only be dissolved, if there is a Court Decision that has legal certainty about the case. In Perppu No. 2 of 2017, the Government is also authorized unilaterally to dissolve CSOs.

Substantially Article 61 and 62 in Perppu Number 2 Year 2017 which regulates the mechanism of dissolution of CSOs, viewed from the 1945 Constitution is unconstitutional. The article allows the government to unilaterally revoke the status of a CSO without being preceded by an examination in the Court. The elimination of due process of law in the dissolution of CSOs leads the government to be a dictatorial Government. This is contrary to Article 1 paragraph 3 of the 1945 Constitution that Indonesia is a State of Law. Where one of the characteristics of a State of law is the existence of a characteristic limitation of power in the exercise of state power.

B. Recommendations

In order to freeze and dissolve organizations in accordance with the principles of the State law and democracy, and to ensure the freedom of association in Indonesia, the Perppu No. 2 of 2017 should be amended. The Dissolution Mechanism of the Perppu must contain due process of law in order to avoid any arbitrariness of the Government.

The authority in the Dissolution of CSOs may be granted to the Supreme Court as well as to the Constitutional Court as the interpreter and the guardian of constitution, the Constitutional Court may give a verdict on deviation of the right and freedom of association that regulated in the 1945 Constitution.

To overcome the problem of inefficiency due to the length of time required in the dissolution of a CSO. The government can shorten the stages of the dissolution of CSOs such as providing time limits to the Judiciary in examining, hearing, and deciding cases of dissolution of CSOs. If in Law No. 17 of 2013 the MA process has no restrictions, In the Perppu can be given time to the Supreme Court and the Constitutional Court in examining cases such as 45 days so that the certainty of the case can be guaranted.

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FACTORS INFLUENCING FIRM’S BOND AND SEASONED EQUITY OFFER ISSUANCE OF NON-FINANCIAL FIRMS IN INDONESIA CAPITAL MARKET

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Abstract

After a firm initial public offering, a firm can use the capital market again to gain financing, by issuing corporate bond and issuing seasoned equity offer. In Indonesia Capital Market, after firms initial public offering, some of the firms issue bond or seasoned equity offer, while some of the firms do not issue bond or seasoned equity offer. The most common type of seasoned equity offering in Indonesia is rights offering. This research aims to explain factors that is influencing firm’s decision whether or not to issue bond or rights in Indonesia. The research was conducted with the data between 2008-2013. The methodology used for this research was Probit, by using Stata software. The result showed that some factors influenced the bond issuance and seasoned equity offer, such as: Size, Growth and Profitability.

Keyword:
Bonds offer, Seasoned Equity Offer, Capital Market

Introduction

After a firm initial public offering, a firm can use the capital market again to gain financing, by issuing corporate bond and issuing seasoned equity offer. In Indonesia Capital Market, after firms initial public offering, some of the firms issue bond or seasoned equity offer, while some of the firms do not issue bond or seasoned equity offer. The most common type of seasoned equity offering in Indonesia is rights offering. The factors that influence firm’s decision whether or not to issue bond or rights in Indonesia, has not yet been researched. Table 1 shows bond and right issuance in Indonesia capital market during 2008-2013 that was requested from Indonesia Financial Service Authority.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Right Issuance</th>
<th>Number of Bond Issuance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>29</td>
<td>43</td>
</tr>
<tr>
<td>2009</td>
<td>11</td>
<td>75</td>
</tr>
<tr>
<td>2010</td>
<td>31</td>
<td>74</td>
</tr>
<tr>
<td>2011</td>
<td>27</td>
<td>102</td>
</tr>
<tr>
<td>2012</td>
<td>22</td>
<td>125</td>
</tr>
<tr>
<td>2013</td>
<td>19</td>
<td>130</td>
</tr>
</tbody>
</table>

Source: Indonesia Financial Service Authority Database, Department of Capital Market Supervision

Firms need financing to invest in new project, pay debt, expansion, acquisition, or for operational activities. There are two sources of financing, which are internal financing and external financing. Internal financing comes from retained earnings, External financing comes from issuing debt or equity. Bond is categorized as debt and right is categorized as equity. (Ross, Westerfield, & Jaffe, 2008)

Didier & Schmukler (2013) researched the factors that influence firms decision to issue bond and rights, in China and India, after their initial public offering in the stock market. The research use
firm’s size, growth, and profitability, at year 2004, as the independent variable. For the dependent variable, the research use dummy variable, valued as 1 if a firm issue bond at least once during 2005-2011, and 0 if a firm did not issue bond at all during those period. Another dependent variable is also a dummy variable, valued as 1 if a firm issued rights at least once during 2005-2011, and 0 if a firm did not issue rights at least once during 2005-2011. The research of Didier & Schmukler (2013) in India and China used the method of probit regression. The result is that firms that are after their initial public offeringissue bond and right, have higher size, higher growth, and higher profitability prior to the bond and right issuance.

According to Frank & Goyal (2009), size is an important factor on firm’s debt issuance. Firm with higher asset, is usually more diversified, and have lower risk. Firms with higher asset are also better known, as they have been around longer. This increase their reputation, and investor are more confident to buy their bond. Fazzari (1988) stated that financial constraint is the difficulty of firms to access the capital market for external financing. Based on this, it is also more likely for firm with higher asset to issue right rather than not, because larger firm are less financially constrained.

According to Fama & French (2002), firms with higher level of growth have higher need of financing for investing activities. To fulfill the need for financing, higher growth firms could not just rely on internal financing. Firms with higher growth usually have limited internal financing source. Firms usually issue external financing during their high growth, such as bond. According to Gujarati (2002), firms that already achieve the level of high growth, will have higher business growth than earning growth. The increase in internal cashflow is lower than the need of fund to financing investment activities. This is the reason why firm need external financing. So based on this, firms with higher level of growth are more likely to issue bond and right.

According to Jensen (1986), firms with higher profitability will have lower cost of financial distress, and interest tax shield is more valuable to the firm. Based on the perspective of tax-bankruptcy trade off, profitability has positive influence on firm bond issuance. Long (2014) found that the higher the firm’s profitability, the more likely it is for the firm to issue equity, so firm’s profitability also has positive influence on firm right issuance.

This research will follow the research by Didier & Schmukler (2013), applying it in Indonesia, as it has not yet been researched in Indonesia. The period for this research is 2008-2013. The reason for the period of 2008-2013 is because to study the issuance of bond and rights in Indonesia Capital market after firm’s initial public offering after the global financial crisis. Didier&Schmukler (2013) mentioned in their article that their result is robust if the period before and after financial crisis is separated. This research will use logit regression.

There are some theories about firm capital structure. According to Myers (2004), capital structure is the combination between securities and other sources of financing to finance investment activities. Some of the theories about capital structure are pecking-order theory, market timing theory, signaling theory, trade-off theory, and Modigliani-Miller theory. This theory will be used in analyzing the influence of firm size, growth, and profitability on firm bond and right issuance.

The result of this paper is expected to help analyze the factors that influence the issuance of bond and right for firms that are listed in the Indonesia Capital Market. This research will also add to the existing literature of firm’s capital structure. Capital structure is the choices of alternative of combination between debt and equity in firm’s balance sheet. Bond is classified as debt and right is classified as equity. By analyzing the factors that influence firm’s issuance of corporate bond and right, using capital structure theory and previous researchs about capital structure, the result of this paper will add to the study of firm capital structure.

After firm’s initial public offering, firms have the choice to use the capital market again for financing activity, through bond issuance and right issuance. Some listed firms choose to issue bond or right, but some firms choose not to issue bond or right. The factors that influence firm’s decision whether to do bond issuance or right issuance or not, has not yet been researched. This is the reason that motivate the researcher to do this research of what are the factors that influence the listed firm’s bond issuance and right issuance after their initial public offering.
Based on what already discussed, the questions that can be generated are:
1. Does firm’s size has positive influence on listed firm’s bond issuance decision?
2. Does firm’s growth has positive influence on firm’s bond issuance decision?
3. Does firm’s profitability has positive influence on firm’s bond issuance decision?
4. Does firm’s size has positive influence on firm’s rights issuance decision?
5. Does firm’s growth has positive influence on firm’s rights issuance decision?
6. Does firm’s profitability has positive influence on firm’s rights issuance decision?

**Capital Structure Theory**
A firm’s capital structure have significant influence on the firm’s value and cost of capital. According to Myers (2004), a study about capital structure is a study that tries to explain the combination between securities and other sources of financing to finance investment activities. These are some theories that discuss about capital structure, which are pecking order theory, trade-off theory, signaling theory, market timing theory, and Modigliani-Miller theory.

**Pecking Order Theory**
Pecking order theory states that in doing financing, firm prioritize internal financing first, rather than external financing. Firm prefer to use retained earning rather than debt financing and equity financing. This theory is based on two basic assumptions. The first assumption is that manager have better information about the investment opportunity at the firm, compared to the public. The second basic assumption is that manager act as a representative of the shareholders (Myers, 2004).

The choice between internal financing and external financing is based on choosing the lowest level of risk. Retained earnings is picked as the main financing source because retained earnings is cheaper and does not release firm’s information to the public. This is different in bond and equity issuance, when firm need to release information to the public, such as financial report. If retained earnings is not sufficient, then debt financing will be used. Equity financing will only be used as the last resort of financing, if debt financing is not sufficient. Firm tend to avoid new equity issuance because the cost is relatively high and new equity issuance is a sign to the shareholder and potential investor that the current condition and future prospect of the company is not in good condition.

**Trade-off Theory**
According to trade-off theory, capital structure is influenced by the trade-off between the cost and benefit of debt. One existing perspective is tax-bankruptcy trade-off, when a company is trying to balance between the tax benefit of debt and the deadweight costs of bankruptcy caused by debt. If a company increase its amount of debt, then the company will gain tax benefit through interest tax shield. But in the other hand, company will become more vulnerable to the bankruptcy risk caused by the increase amount of debt.

There is also another perspective called agency problems, where debt will cause managers to be more disciplined, and reduce agency problem from free cashflow because debt must be paid to avoid bankruptcy (Jensen and Meckling, 1976; Jensen 1986). Even though debt can reduce conflict between shareholder and manager, but it can cause conflict between shareholder and debtholder (Stulz, 1990).

By using debt, firm have the obligation to pay interest. Interest is tax deductible, which means that interest can reduce the amount of tax that the firm must pay, and this will result in increase in the value of cash flow after tax. Because of this, company will be able to increase its cashflow and market value through the optimal level of debt.

But if a firm exceed its optimal level of debt, the firm will face financial distress which is an exposure to high bankruptcy cost, because the probability of the firm being unable to repay its debt interest and principal will increase. When a firm is facing bankruptcy, the firm will face two types of
bankruptcy cost, which is direct bankruptcy cost and indirect bankruptcy cost. Direct bankruptcy cost is the direct cost that occur because of the bankruptcy at the firm. The example of direct bankruptcy cost is when firm goes bankrupt, it will go through an administrative procedure that need some cost. Indirect bankruptcy cost is indirect cost that occur from activities of a firm to avoid bankruptcy. These activities are such as reducing the research activity budget and advertising budget that can result in the decrease of their customer satisfaction, which can in turn result in decrease in firm’s profit.

**Signaling Theory**

This theory is based on the assumption that manager and shareholder does not have the same access to firm information, which is also called asymmetric information. When the firm capital structure change, this will act as an information to the shareholder, which in turn can change the value of the company. In other words, this can be called as signaling.

According to Ross (1977), when firm issue new debt, this is a signal to shareholder and potential investor about the improvement of the future prospect of the firm. This based on the fact that increase in debt means that there is an increase in limitation of cash flow and financial cost, and because of this manager will only issue new debt again if they are sure that firm can meet its future obligation in paying its debt. Another research show that new equity issuance will create a signal that will cause the share price to decrease, while repurchasing share will give a signal that cause the share price to increase. (Siaw, 1999). This is based on the fact that shareholder and potential investor thinks that new equity issuance is a manager’s way to reduce their ownership in the firm when the condition is not promising, and shares repurchase is manager’s way increase their ownership in the firm when the condition is promising.

**Market Timing Theory**

This theory states that firm tend to issue equity according to market timing behavior, which is when the share of price is increasing. According to Baker and Wurgler (2002), capital structure can be best understood as a group of securities that is picked based on the estimation of different market conditions.

Baker and Wurgler specifically states that in corporate finance, equity market timing is based on the practice of issuing equity when the share price is high, and repurchase the share when the price is low. The goal is to take advantage from the fluctuation of the cost of equity compared to other source of financing. The result from Baker and Wurgler is also supported by Hovaikimian, et al. (2001) that states that firm tends to issue equity when the stock price is rising.

The basic idea of this theory is that manager will see the condition of debt and equity markets before choosing the financing instruments. If firm need financing, they will choose instruments that is most suitable with the current market condition. If the condition of both debt and equity market is not profitable, than firm can postpone the debt and equity issuance. On the other hand, if the market condition is good, then bond and equity issuance can be done even though currently the firm does not need additional financing.

**Modigliani-Miller Theory**

In 1958, Modigliani-Miller theory is introduced. MM model is known with two preposition which is preposition I and II. MM preposition I said that the firm value of unlevered firm will be the same with the value of levered firm. The result is that the optimal capital structure is hard to be determined. In MM preposition II, Modigliani-Miller states that the required return of equity is positively related with leverage (Ross, et al, 2008).

These Modigliani-Miller models follow a couple of assumptions, which are:

1. There is no brokerage cost
2. There is no taxes
3. There is no bankruptcy cost
4. Investors are allowed to borrow with the same rate as firms
5. All investors have the same information with the management about the future investment opportunities of the firm
6. Earning before interest and tax is not influenced by debt

In 1963, Modigliani-Miller added the assumption of the existence of taxes in their model. In MM model preposition I, with the assumption of existence of taxes, a value of a firm is the function of the increase in leverage, caused by tax-shield. In the existence of taxes, MM preposition II also stated that the required return on equity have the positive relationship with firm leverage. (Ross et al, 2008)

The Influence of Size to Firm’s Bond Issuance

Based on the research by Didier & Schmukler (2013), firm’s size has positive influence on firm’s bond issuance decision. In China and India, only a few firm issue bond after their initial public offering. Size is an important factor in firm’s bond issuance decision. Issuing firms have larger asset prior to the issuance of bond. Smaller firms are less likely to issue bond.

The result is supported by Rajan & Zingales (1995), that stated that size is an important factor on firm’s debt issuance. Firm with higher asset, is usually more diversified, and have lower risk. Firms with higher asset are also better known, as they have been around longer.

Based on trade off theory, firms with higher total asset will have higher level of debt. This is because larger firm tend to have lower risk of bankruptcy because they have large asset which they can liquidate in short period of time if they have financial difficulty. Besides, larger firm also has better reputation because they viewed as more stable, so it is easier for them to issue new debt. (Rajan & Zingales, 1995).

According to Frank & Goyal (2009), that researched publicly traded firm in America during 1950-2013, size is an important determinant in firm’s bond issuance. Larger firms are more diversified than smaller firms. Diversification can protect a company from the risk of failure. This reduction of risk makes bond investor more confident in purchasing the bond.

H1: Firm’s size has positive influence on firm’s bond issuance decision

The Influence of Growth to Firm’s Bond Issuance

Based on the research by Didier & Schmukler (2013) firm’s growth has positive influence on firm’s bond issuance decision. In China and India, firms that issue bond after their initial public offering, have higher growth, prior to the issuance of bond. Firms that have low growth are less likely to issue bond.

The result is supported by a research by Fama & French (2002), that firm’s growth is an important factor in firm’s bond issuance. According to Fama & French (2002), based on pecking order theory, firms with higher level of growth have higher need of financing for investing activities. To fulfill those need, firms could not just rely on internal financing. Usually, these firms are still on growth stage, and internal financing source is still limited. Firms usually issue bond to cover the shortage of internal financing during their high growth.

According to Gujarati (2002), firms that already achieve the level of high growth, will have higher business growth than earning growth. The increase in internal cash flow is lower than the need of fund to financing investment activities. This is the reason why firm need external financing. So based on this, firms with higher level of growth are more likely to issue bond and right.

Table 2 BCG Matrix

<table>
<thead>
<tr>
<th>Market Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
</tr>
</tbody>
</table>

1100
Based on the BCG matrix, firms that are growing, are usually net cash users. These firms are categorized as star and question mark. These firms consume a lot of cash, and this makes them need investment. One of the reasons is sometimes the growth is spurred by the high investment. This supports the hypothesis that higher growing firms need more investment, such as bond and right issuance.

\( H2: \) Firm’s growth has positive influence on firm’s bond issuance decision

### The Influence of Profitability to Firm’s Bond Issuance

Based on the research by Didier & Schmukler (2013), firm’s profitability has positive influence on firm’s bond issuance decision. In China and India, firms that issue bond after their initial public offering, have higher profitability, prior to the issuance of bond. Firms that have low profitability are less likely to issue bond.

The result is supported by Jensen (1986). Firms with higher profitability will have lower cost of financial distress, and interest tax shield is more valuable to them. Based on the perspective of tax-bankruptcy trade-off, firms with higher profitability will have higher debt. Besides, based on the agency problems theory, firms with higher profitability will have more free cash flow, so that higher level of debt will make managers more disciplined in paying the interest and principal of bonds issued (Jensen 1986).

Firms with higher profitability are less likely to default on their debt. This is because they have more cash available to pay for their debt. Using the tax-bankruptcy trade-off perspective, these high profitable firm will have more incentive in issuing bond, since they have low bankruptcy possibility, so the tax shield they can is viewed as more valuable.

\( H3: \) Firm’s profitability has positive influence on firm’s bond issuance decision

### The Influence of Size to Firm’s Rights Issuance

Based on the research by Didier & Schmukler (2013), firm’s size has positive influence on firm’s rights issuance decision. In China and India, only a few firms issue right after their initial public offering. Size is an important factor in firm’s right issuance decision. Issuing firms have larger asset prior to the issuance of right. Smaller firms are less likely to issue right.

The result is supported by Fazarri, et al (1988). According to Fazarri, et al (1988) financial constraint is the difficulty of firms to access the capital market for external financing. Firms with higher assets are less financially constrained. Based on this research, it is more likely for firms with higher asset to issue rights in the capital market.

Small firms are more financially constrained, which make it more difficult for them to gain external financing. Its hard for the small firms to gain external financing because they don’t have enough reputation for investors to invest in their equity. Small firms usually rely on other types of financing rather than bond and equity. Based on this analysis, the higher the firm size, the more likely it is for the firm to issue right.

\( H4: \) Firm’s size has positive influence on firm’s rights issuance decision

### The Influence of Growth to Firm’s Rights Issuance

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<table>
<thead>
<tr>
<th>Growth</th>
<th>Star</th>
<th>Question Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Cash Cow</td>
<td>Pet / Dog</td>
</tr>
</tbody>
</table>

Source: www.bcgperspectives.com
Based on the research by Didier & Schmukler (2013) firm’s growth has positive influence on firm’s right issuance decision. In China and India, firms that issue bond and right after their initial public offering, have higher growth, prior to the issuance of right. Firms that have low growth are less likely to issue right.

The result is supported by Gujarati (2002), firms that already achieve the level of high growth, will have higher business growth than earning growth. The increase in internal cashflow is lower than the need of fund to financing investment activities. This is the reason why firm need external financing. So based on this, firms with higher level of growth are more likely to issue right.

Based on the research by Didier & Schmukler (2013), firm’s profitability has positive influence on firm’s right issuance decision. In China and India, firms that issue right after their initial public offering, have higher profitability, prior to the issuance of bond and right. Firms that have low profitability are less likely to issue right. Few firms in China and India capital market, right after their initial public offering. Profitability is an important factor in this issuance. The higher the profitability, the more likely the firms will issue right.

Long (2014) finds that the higher the firm’s profitability, the more likely it is for the firm to issue equity. Researching the determinants of equity financing in China, it is found out that profitability is an important determinant in firm’s equity issuance. In China, firms with low profitability are less likely to issue equity. The higher the profitability, the higher also the amount of equity raised.

Efficient Market Hypothesis

According to Fama (1965) efficient market hypothesis is how far the information in the capital market is reflected in the stock price. There are three types of efficient market hypothesis, which are:

a. Weak-form efficiency
Weak form efficiency means that the price in of stock in the capital market reflects the past information and historical data. Change of price is independent and is based on random walk.

b. Semi-strong efficiency
Semi-strong efficiency means that stock price reflect all new information that is available in the public, and also past information and historical data. Stock analysis use the information that is available to all investor.

c. Strong-form efficiency
Strong-form efficiency is when stock price reflect all information, whether new or historical, that is available to public and also internal information.

Research Methodology
In this research, the researcher used the sample of non-financial firms that is listed in Indonesia Stock Exchange during 2008 until 2013. This is because non-financial firms and financial firms have different capital structure. This research is based on the previous research by Didier & Schmukler (2013), and follow the model and variables.

These are criteria used in this research: Firms are already listed in the Indonesia Stock Exchange since 2008 and the sample is non-financial firms. The number of firms that is included in the research sample is 269 firms. The reason of using the sample of non-financial firms is because non-financial firms and financial firms are different. Non-financial firms have different capital structure and balance sheet with financial firms.

The first model will test the influence of firm growth, firm size, firm profitability, and firm leverage to firm bond issuance. The second model will test the influence of firm growth, firm size, firm profitability, firm leverage, to firm rights issuance. Both model is based on the research of Didier & Schmukler (2013)

Model 1

\[ \text{Prob (Bond} = 1 \text{)} = \beta_1 \text{SIZE} + \beta_2 \text{GROWTH} + \beta_3 \text{PROFITABILITY} \]

This model is based on the research by Didier & Schmukler (2013), that researched the influence of size, growth, and profitability on firm bond issuance.

Prob (BOND=1) = firm’s bond issuance during 2008-2013. The value is given a dummy of 1 if a firm issue bond at least once during 2008 until 2013, and a value of dummy 0 if it does not issue bond at all during 2008 until 2013
SIZE = the amount of natural logarithm of total asset by the firm, at the year of 2008
GROWTH = the change of firm’s total asset from 2008 to 2007.
PROFITABILITY = the ratio of net income divided by total asset of the firm in 2008

Model 2

\[ \text{Prob (RIGHT} = 1 \text{)} = \beta_1 \text{SIZE} + \beta_2 \text{GROWTH} + \beta_3 \text{PROFITABILITY} \]

This model is based on the research by Didier & Schmukler (2013) that researched the influence of size, growth, and profitability on firm right issuance.

Prob (RIGHT = 1) = firm’s right issuance during 2008-2013. The value is given a dummy of 1 if a firm issue right at least once during 2008 until 2013, and a value of dummy 0 if it does not issue right at all during 2008 until 2013.
SIZE = the amount of natural logarithm of total asset by the firm, at the year of 2008
GROWTH = the change of firm’s total asset from 2008 to 2007.
PROFITABILITY = the ratio of net income divided by total asset of the firm in 2008

Analysis and Discussion

Table 4 - Descriptive Analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Median</th>
<th>Std.Dev</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profitability</td>
<td>269</td>
<td>3.777773</td>
<td>2.943194</td>
<td>7.681513</td>
<td>-12.2861</td>
<td>21.35649</td>
</tr>
<tr>
<td>Size</td>
<td>269</td>
<td>25.87327</td>
<td>26.90269</td>
<td>3.476561</td>
<td>17.8544</td>
<td>29.92937</td>
</tr>
<tr>
<td>Growth</td>
<td>269</td>
<td>1.195834</td>
<td>1.111056</td>
<td>0.295835</td>
<td>0.808388</td>
<td>2.046632</td>
</tr>
</tbody>
</table>

Source: Developed by The Researcher

In analyzing the mean, median, standard deviation, minimum and maximum value, descriptive statistic is used. Winsorized process is already used in the 5% and 95% percentile. Winsorizing is used as a treatment for the data outliers.

Size, is measured by natural logarithm of total asset. The mean value of size is 25.87327. The standard deviation is 3.476561. The smallest firm has mean value of 17,8544, which is PT. Asia Resources Tbk., which is in the energy industry, and the biggest firm has the mean value of 29,92937 which is PT. Telekomunikasi Indonesia Tbk. PT. Telekomunikasi Indonesia Tbk. is in the telecommunication industry.

Growth is measured by the difference of total assets between 2008 and 2007. The mean for growth is 1,195834. The standard deviation for growth is 0,295835. Firm with highest growth has value of 2,046632 which is PT. Mitra International Tbk which is in the transportation industry. Firm with lowest growth has the value of 0,8083 which is PT. Tanah Laut Tbk. PT. Tanah Laut Tbk. is in the transportation industry.

Profitability, measured by return on asset, is the ability for the firm to generate net income divided by its asset. The mean for the profitability is 3,777773. The standard deviation for the profitability is 7,681513. The firm with the highest profitability has the value of 21,35649, which is PT. International Nickel Indonesia Tbk. PT. International Nickel Indonesia is in the energy industry. The firm with smallest profitability has the value of -12,2861 which is PT. Tanah Laut Tbk, the reason is because in 2008 PT. Tanah Laut Tbk. has net income of Rp. -5.597.000.000.000.

Logit Regression Model Analysis

The hypothesis test of this research use logit regression. The software used is Stata software. Table 5 will show the result of the hypothesis of the influence of firm size, growth, and profitability on firm bond issuance.

Tabel 5 Stata Logit Bond Regression Result

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Z</th>
<th>P&gt; IzI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>0.265116</td>
<td>0.0946482</td>
<td>2.80</td>
<td>0.005*</td>
</tr>
<tr>
<td>Growth</td>
<td>1.701944</td>
<td>0.5678305</td>
<td>3.00</td>
<td>0.003*</td>
</tr>
<tr>
<td>Profitability</td>
<td>0.0436051</td>
<td>0.0261922</td>
<td>1.66</td>
<td>0.096**</td>
</tr>
</tbody>
</table>

*Significant at 95% Confident Interval
**Significant at 90% Confident Interval

Source: Developed by The Researcher

The Influence of Size on Bond Issuance

The first hypothesis that need to be tested is the influence of size on bond issuance. The research hypothesis is that size has positive influence on bond issuance. It can be seen that the p value
for size is 0.005 which is lower than 0.05. The coefficient is 0.265116. This means that the research hypothesis can be accepted. Thus, firm size has significant and positive effect on firm bond issuance. The coefficient is 0.265116. The odds value is $e^{0.265116} = 1.304$. This means that for every 1% increase in firm size, the chance for firm bond issuance will increase by 1.304%.

This can be explained using trade-off theory. Larger firm is viewed as more stable. This stability can give them good rating. This makes it easier for the firm to issue new bond. The result is supported by Rajan & Zingales (2009).

Another explanation on the positive influence between firm size and bond issuance is because larger firm are more diversified. This diversification reduce the failure risk of a firm. This makes bond investor more confident in purchasing the bond (Frank & Goyal 2009).

Size of the firm have positive influence because of its reputation and its diversification. Bigger firms usually have been around in the market for longer time than smaller firms. Because of this reputation, bigger firms are more likely to have better rating. This makes the investor more confident in buying their bond. Firms with higher diversification have more business areas than less diversified firms, and this makes them have lower risk in failure. This also makes the investor more confident in buying their bond.

The Influence of Growth on Bond Issuance

The second hypothesis that need to be tested is the influence of growth on bond issuance. The research hypothesis is that growth has positive influence on firm bond issuance. It can be seen that the p value for growth 0.003, which is higher than 0.05. The coefficient is 1.701944. This means that the research hypothesis can be accepted. Thus, firm growth does have significant and positive effect on firm bond issuance.

The coefficient is 1.701944, The odds value is $e^{1.701944} = 6.016$. This means that for every 1% increase in firm growth, the chance for firm bond issuance will increase by 6.016%.

The reason behind this is because firms that already achieve the level of high growth, will have higher business growth than earning growth. The increase in internal cashflow is lower than the need of fund to financing investment activities. This is the reason why firm need external financing. So based on this, firms with higher level of growth are more likely to issue bond and right. (Gujarati, 2002)

The result is also supported by Fama & French (2002). According to Fama & French (2002), based on pecking order theory, firms with higher level of growth have higher need of financing for investing activities. To fulfill those need, firms could not just rely on internal financing. Usually, these firms are still on growth stage, and internal financing source is still limited. Firms usually issue bond to cover the shortage of internal financing during their high growth.

Based on the BCG matrix in table 3, firms that are growing, are usually net cash users. These firms are categorized as star and question mark. These firms consume a lot of cash, and this makes them need investment. One of the reason is sometimes the growth is spurred by the high investment. This supports the hypothesis that higher growing firms need more investment, such as bond issuance.

Firms with higher growth needs more external financing, such as through bond, than firms with lower growth. This is because firms with higher growth need capital to sustain its growth in the future, and they also have more growth opportunuty. Usually the amount of capital from internal financing is not sufficient, so they will be more influenced in issuing external financing.

The Influence of Profitability on Bond Issuance

The third hypothesis that need to be tested is the influence of profitability on firm bond issuance. It can be seen that the p value for size is 0.096 which is lower than 0.1. The coefficient is 0.0436051. This means that the research hypothesis can be accepted. Thus, profitability has significant and positive effect on firm bond issuance.
The coefficient is 0.0436051. The odds value is $e^{0.0436051} = 1.045$. This means that for every 1% increase in firm profitability, the chance for firm bond issuance will increase by 1.045%.

The reason is because firm with higher profitability will have lower cost of financial distress. Financial distress is a condition where a company can not meet or has difficulty paying off its financial obligations to its creditors. Firms with higher profitability have better ability to meet its obligation such as paying its debt. According to the trade-off theory, using the tax-bankruptcy trade-off, firms with higher profitability have the incentive of using more tax shield from bond issuance, as they have lower cost of financial distress.

Profitability influence firm bond issuance because firms with higher profitability is seen as having less risk than firm with lower profitability. Firms with high profitability is seen by the public as firm that have good future. This makes investor more confident in giving them long-term loan such as bond.

Table 6 shows the result of logit regression of firm size, growth, and profitability, on firm right issuance.

|                | Coefficient | Std. Error | Z   | P>|z| |
|----------------|-------------|------------|-----|-----|
| Size           | -0.0021692  | 0.0446103  | -0.05| 0.961|
| Growth         | 1.214648    | 0.48424014 | 0.012| 0.012*|
| Profitability  | -0.0437966  | 0.0213738  | 0.04| 0.04*|

*Significant at 95% Confident Interval **Significant at 90% Confident Interval

Source: Developed by The Researcher

The Influence of Size on Right Issuance

The fourth hypothesis that need to be tested is the influence of firm size on firm bond issuance. The research hypothesis is firm size has positive influence on firm right issuance. It can be seen that the p value for size is 0.961, which is higher than 0.05 and 0.01. The coefficient is -0.0021692. The result is not significant. This means that the research hypothesis could not be accepted. Thus, firm size does not have significant and positive effect on firm right issuance. This is different with the result of Didier & Schmukler (2013) where size has positive significant influence on firm right issuance.

A possible explanation of why size does not influence firm right issuance is because firms with different amount of size may choose other instruments than equity issuance. Firms have different capital structure policy.

Another possible explanation is firms may prefer to use bond instruments because of the tax shield feature of the bond. Using the trade-off theory, firms may find it more profitable if they issue bond rather than equity, finding that the tax shield advantage is higher in the tax shield-bankruptcy trade off.

Each firms have different capital structure policy. From the 269 firms used in this sample, each firm have their own capital structure policy. This could also be the reason of why size does not significantly influence firm right issuance, as firms with different sizes may choose different types of external financing.

The Influence of Growth on Right Issuance

The fifth hypothesis that need to be tested is the influence of growth on firm right issuance. The research hypothesis is that firm growth has positive influence on firm right issuance. It can be seen that the p value for growth is 0.012 which is lower than 0.05. The coefficient is 1.214648. This means that the research hypothesis can be accepted. Thus, growth has significant and positive effect on firm right issuance.

The coefficient is 1.214648. The odds value is $e^{1.214648} = 3.369$. This means that for every 1% increase in firm growth, the chance for firm right issuance will increase by 3.369%.
Based on the research by Didier & Schmukler (2013) firm’s growth has positive influence on firm’s bond issuance decision. The result is supported by Gujarati (2002), firms that already achieve the level of high growth, will have higher business growth than earning growth. The increase in internal cashflow is lower than the need of fund to financing investment activities. This is the reason why firm need external financing. So based on this, firms with higher level of growth are more likely to issue bond and right.

Based on the BCG matrix on table 3, firms that are growing, are usually net cash users. These firms are categorized as star and question mark. These firms consume a lot of cash, and this makes them need investment. One of the reason is sometimes the growth is spurred by the high investment. This supports the hypothesis that higher growing firms need more investment, such as bond and right issuance.

Firms with higher growth needs more external financing, such as through right, than firms with lower growth. This is because firms with higher growth need capital to sustain its growth in the future, and they also have more growth opportunity. Usually the amount of capital from internal financing is not sufficient, so they will be more influenced in issuing external financing.

The Influence of Profitability on Right Issuance

The sixth hypothesis that need to be tested is the influence of firm profitability on firm right issuance. The research hypothesis is that profitability has positive influence on firm right issuance. It can be seen that the p value for size is 0.04 which is lower than 0.05. The coefficient is -0.0437966. This means that the research hypothesis is rejected. Thus, profitability does not have significant and positive effect on firm right issuance.

The result is different with the result of Didier & Schmukler (2013), where profitability has positive influence on firm right issuance. The explanation of why firm profitability has negative influence on firm right issuance can be explained by signalling theory. Signalling theory is based on asymmetric information, that manager and shareholder does not have the same access of information. Firm increase in profitability is a good signal. This increase in profitability may be used to give dividends to the shareholder. Issuing right, which is issuing equity again, can be viewed as a bad signal.

According to Amitage (2009), based on asymmetric information and signaling theory, right issue can be viewed as a signal that the firm’s share price is overpriced. Right issue also may make the ownership of the current shareholders get diluted. These reasons will create right issue as a bad signal after firm’s high profitability.

Based on the research by Ikram & Nugroho (2014), Indonesia Capital Market is efficient in semi strong form. In an efficient market, price will reflect all available information. In the semi strong form, the price reflect rapidly to new information released to the public. If a firm issue new equity, this can give bad signal to the market, and the share price of the firm could decrease, adapting to the new information. Firm with high profitability would want to avoid this, as issuing new equity after their high profitability may decrease their share price in the semi strong market efficient hypothesis.

The results of the influence of firm size, growth, and profitability on firm bond and right issuance is summarized in table 9. Some of the results are the same as expected while some of the results are different than expected.

<table>
<thead>
<tr>
<th>Bond</th>
<th>Expected Result</th>
<th>Actual Result</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>+</td>
<td>+</td>
<td>Significant</td>
</tr>
<tr>
<td>Growth</td>
<td>+</td>
<td>+</td>
<td>Significant</td>
</tr>
<tr>
<td>Profitability</td>
<td>+</td>
<td>+</td>
<td>Significant</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Expected Result</th>
<th>Actual Result</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>+</td>
<td>-</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Growth</td>
<td>+</td>
<td>+</td>
<td>Significant</td>
</tr>
<tr>
<td>Profitability</td>
<td>+</td>
<td>-</td>
<td>Significant</td>
</tr>
</tbody>
</table>

Source: Developed by Researcher

**Conclusion and Managerial Implication**

This research has the objective to identify whether firm’s size, growth, and profitability, has positive influence on firm’s bond and rights issuance for non-financial firms that are listed in Indonesia Stock Exchange during 2008-2013. Firm’s size is represented by firm’s natural logarithm of total assets of 2008, firm’s growth is represented by firm’s change of total asset between 2008 and 2007, firm’s profitability is represented with firm’s return on asset ratio on 2008. Based on the analysis from the previous chapters, there are some conclusions that could be taken from this research, which are:

This research shows that:

1. **Size does have positive influence on firm bond issuance**
   
   This is supported by the previous findings of Didian & Schmukler (2013), Rajan & Zingales (2009), and Frank & Goyal (2009). The reason is because larger firm is viewed as more stable, and this stability can give them good rating, and makes the firm easier to issue bond. Larger firms are also more diversified, reducing the risk of failure at the firm, and making investor more confident in buying their bond.

2. **Growth does have positive influence on firm bond issuance**
   
   This is supported by the previous findings of Didier & Schmukler (2013) and Gujarati (2002). The reason is because firms with high growth, has higher business growth than earning growth. The increase in internal cashflow is lower than the need of fund to finance firm’s activities. Another reason is using the BCG matrix analysis, firms that are growing, are usually net cash users. These firms need a lot of cash, and this makes them need external financing, such as bond.

3. **Profitability does have positive influence on firm bond issuance**
   
   The result is supported by Didier & Schmukler (2013). Firms in India and China have higher profitability prior to their bond issuance. Firms with higher profitability have lower financial cost of distress, and using the tax shield-bankruptcy theory, firms with higher profitability find bond financing more valuable.

4. **Size does not have positive influence on firm right issuance**
   
   The result is different with the research by Didier & Schmukler (2013) and Gujarati (2002). A possible explanation is that firms may choose other instruments rather than equity issuance. Firms may have various capital structure policy, other than equity financing. Another possible explanation is that using the trade-off theory, firms may find it more profitable if they issue bond rather than equity.

5. **Growth does have positive influence on firm right issuance**

   This is supported by the previous findings of Didier & Schmukler (2013) and Gujarati (2002). The reason is because firms with high growth, has higher business growth than earning growth. The increase in internal cashflow is lower than the need of fund to finance firm’s activities. Another reason is using the BCG matrix analysis, firms that are growing, are
usually net cash users. These firms need a lot of cash, and this makes them need external financing, such as right.

6. Profitability does not have positive influence on firm right issuance

The result is different with the finding of Didier & Schmukler (2013). The reason can be explained by signaling theory, that right issue can be viewed as a signal that the firm’s share price is overpriced. Right issue also may make the ownership of the current shareholders get diluted. These reasons will make right issue as a bad signal after firm’s high profitability.

There are some managerial implication from this research, which are:

1. For firms in Indonesia
   Firms in Indonesia can pay more attention with their capital structure, as there are many choices for choosing instruments for their capital structure. There are some considerations when choosing capital structure based on the firm’s financial condition and market situation. For firms that are already listed in the Indonesia Capital Market through initial public offering, these firms can have better consideration before issuing bond or right.

2. For regulator
   Regulator can improve the current regulation to make it easier and cheaper for firms in Indonesia to invest in the capital market. There are some firms in Indonesia who does not use the capital market for financing, and they can be encouraged to invest in the capital market. The barriers and restrictions that discourage firms to invest in the capital market through right and bond can be removed.

3. For academician
   For future research, the duration of the research can be increased. This research use the period after the global financial crisis, the period before the global financial crisis can be used for future research. More independent variables that can influence firm’s bond and rights issuance other than those already included in this researched can also be used. For example, other independent variables that can be used is leverage or capital structure maturity.
   This research use the proxy of change in total asset for growth. Another proxy that can be used is change in sales for growth. This research use the proxy of return on asset ratio for profitability, for future research, the return on equity ratio can be used.

References


Website: www.bcgperspectives.com
The Implementation of Corporate Criminal Liability in Environmental Crime Cases
in Indonesia

Nani Mulyati and Topo Santoso

Abstract

Corporate crimes may bring greater and wider negative impact to the society compared to
street crimes. Environmental crimes, such as forest slashing and burning, are one form of
the criminal acts that are often committed by the corporations. In the last few years, there
are several environmental crime cases undertaken by the corporations in Indonesia. These
cases are important corporate crime cases and have been judged by the courts. This paper
will examine those cases relating to the implementation of the corporate criminal liability’s
doctrine that is adopted by the judges and criminal sanctions given to the corporation to
minimize future environmental crimes. In order to do that, scientific methodology that is
adopted in this research is doctrinal legal research with cases approach, where not only law
cases but also relevant regulations and legal theories are scrutinized to draw conclusion
about the issues. It is found that the judges adopted the doctrine of vicarious liability to
attribute criminal liability to the corporations; where the acts and the mental elements of
the boards represent the acts and the mental elements of the corporation. Moreover,
criminal sanction that is often given to the corporations is criminal fine with some kind of
additional sanctions. It is hoped that the finding of this research will provide crucial
materials for judges, other legal enforcement officers, and academia on how Indonesian
judges implement corporate criminal liability particularly in environmental crime cases.

Keywords: corporate crime, environmental crime, criminal law, corporate criminal liability

Introduction

Environmental pollution is one form of crime that is very dangerous for our earth’s
environment where we live and our grandchildren will live. There are many harmful effects
of environmental pollution, such as health problems because of polluted air, water, and
soil, global warming and other harm and discomfort to other living organisms. Environmental crimes are very likely to involve corporations, where the crimes are committed within the scope of the corporation or for the benefit of the corporation. For example, corporations undertake land clearing by illegally slashing and burning the forest, or corporation could also dispose hazardous and poisonous materials to the environment to reduce production cost and so on.

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Since Law No. 23 of 1997 concerning Environmental Management has been enacted in Indonesia, it is accepted that corporations are independent legal subject that are different from its members; they can be liable criminally in their own name for the crime they committed. Since the passing of this regulation, there have been several legal cases that charged corporations for environmental crimes. Those are important cases in enforcing environmental crimes because not many verdicts convicted corporations as liable subject; most of the cases charged the natural person inside the corporations as the responsible person, not the corporation itself.

This article examines legal judgements that punish corporations for environmental crimes, particularly about its criminal liability and the imposition of the criminal sanction. This paper analysis legal basis that is used by the judges to attribute criminal liability to the corporations, correlation between corporate criminal liability and personal liability of the natural persons inside the corporation, as well as penalty that is imposed to the corporations. In order to answer these questions, doctrinal legal research was adopted, where regulations, law cases, and legal theories were scrutinized to draw conclusion about the issue.

This article is organized in five sections. The first section is the introduction. The second section analyses corporate criminal liability doctrine. Then in the third section, examine corporate criminal liability for environmental crimes stipulated in Indonesian regulations. Section four discusses about the implementation of corporate criminal liability and criminal sanctions that are imposed to corporations in environmental crime cases. And lastly, in the section five there will be conclusion about the issue.

**Corporate Criminal Liability Doctrine**

When explored in depth about corporate criminal liability doctrine, generally can be divided into five doctrines: vicarious liability, identification, aggregation, corporate culture (Pieth & Ivory, 2011) and combined doctrine (Sjahdeini, 2017). Vervaele (2007) divides these doctrines into two approaches, first is indirect liability, where organizations are always considered acting through its members. Therefore, it must be sought individuals who are in certain position within the corporation, whether it is the directors, other executives or other members, and then their *actus reus* and *mens rea* attributed to the corporation. Secondly is direct liability, where *actus reus* and *mens rea* can be traced directly from the corporation. Direct liability approach is the development of realistic corporate personality theory. Scholars who support realistic corporate personality, such as Lederman (2000), argues that corporations are self-identity that possessed all natural characteristics like human. If Vervaele’s opinion associated with corporate criminal doctrine mentioned above, vicarious liability and identification doctrine are indirect liability, while aggregation and corporate culture doctrines are direct liability.

Vicarious criminal liability is doctrine taken from the law of torts in civil law based on respondeat superior doctrine (Garrett, 2014). According to respondeat superior doctrine, a principal may be liable for its agent misconduct, if it is committed within their scope of employment (Sjahdeini, 2007). Employment principle as one requirement in vicarious liability can also be in other relationship based on the delegation principle (Arief, 2010).

The second doctrine is identification. Identification doctrine is the development of vicarious liability doctrine in corporate criminal liability (Maglie, 2005). This doctrine
limits the doctrine of vicarious criminal liability that states that not everyone in the organization has sufficient status to cause corporations to be vicariously responsible for their crimes (Gobert, 2011). According to identification doctrine, corporations are identified through its key person or head of the corporations; these key persons are seen as legal alter ego of the corporations, so their actions are the actions of the corporation (Gobert, 2011).

Next is aggregation doctrine. According to aggregation doctrine, a corporation can own intention or group intention, which can be traced from the aggregation of will and actions of some key persons within the corporation (Pieth & Ivory, 2011). Pursuant to Remmelink as cited by Muladi and Priyatno (2015), shared knowledge of the boards of directors can be considered as corporation’s knowledge. Suprapto as also cited by Muladi and Priyatno (2015) asserts that corporation’s culpability is collective culpability of the corporation’s management. Aggregation doctrine makes it easier to attribute criminal liability to corporation because it eliminates the difficulty of identifying managerial culpability in large corporation (Cavanagh, 2011).

The next doctrine is corporate culture or corporate disorganization doctrine. Pursuant to corporate culture doctrine, a corporation may own guilt by itself if the corporation’s culture or working ethos enables the commission of crime (Pieth & Ivory, 2011). Fisse and Braithwaite (1993) affirm that corporate’s cultures are transmitted from one generation to next generation unaffected by the change of personnel or members of the corporation. Sarre (2007) asserts that corporate’s culture can be observed formally from corporate’s procedures and policies, or informally on how those cultures influence the action and behavior of individual’s within the corporation.

The last is combined doctrine proposed by Sjahdeini (2017) as an alternative to corporate criminal liability. He explains ten elements to be fulfilled: the act is an offence, either an omission or commission; actus reus can be done or ordered by the directing mind or controlling mind of the corporation; mens rea is drawn from the directing mind’s mens rea; benefit the corporation, crime is committed by utilizing corporate’s existence, facility, or budget; the act is intra vires (within powers), carried out in the framework of the goal and purpose of the corporation; criminal act committed by directing mind of the corporation is within his working scope and authority; if the actus reus is not carried out directly by the directing mind, the act shall be by order, or authorized, or approved by the directing mind, or consent shall be deemed to be granted if the directing mind do not prevent or prohibit the commission of the crime or fails to take adequate action when the offence occur; there is no justification and excuse for the crime, actus reus and mens rea do not have to be on one person but can be in some individuals within the corporation.

Corporate Criminal Liability in Indonesian Regulation Concerning Environmental Protection and Management

Some regulations that are currently used as the legal basis in an environmental crime in Indonesia are Law No. 32 of 2009 concerning Environment Protection and Management, Law No. 18 of 2013 concerning The Prevention and Eradication of Forest Destruction, Law No. 41 of 1999 concerning Forestry, Law No. 39 of 2014 concerning Plantation. However this paper only focuses on discussion about corporate criminal liability stipulated on Law. No. 32 of 2009, because this law stipulates corporate criminal
liability more complete.

The provisions regarding corporate criminal liability are stipulated in articles 116 to 120 of Law No. 32 of 2009. Article 116 states that:

(1) “In the case of the environmental crime being committed by, for and on behalf of a business entity, the criminal offense and penalty shall be imposed on:
   a. the said business entity; and/or
   b. person ordering the crime or person acting as activity manager in the crime.

(2) In the case of the environmental crimes as referred to in paragraph (1) being committed by a person acting the working scope of business entity on the basis of working relations or other relations, the penalty shall be imposed on the ordering party or leader in the crime without regarding whether the crime is committed individually or collectively.”

The first important thing to be highlighted from this provision is that corporations meant here is limited to profit oriented organization, because it is intended only to organization with business goal (business entity). Therefore, other types of organization such as non-profit oriented organizations, public corporations, and quasi-public corporations are excluded from criminal liability according to this regulation.

Regarding corporate criminal liability, at a glance, there is no problem with the formulation of Articles 116. If Article 116 (1) is read separately with Article 116 (2), where stipulates that an environmental crime is committed by, for or on behalf of the corporation, therefore the offence and penalty shall be imposed to either the corporation or to the person ordering the crime. It can be concluded from this provision that corporation is subject to criminal prosecution and criminal sanction if the crime committed by, for or on behalf of the corporation. Some criteria that has been proposed by a well known 2003 case in the Netherlands (Drijfmest Case) to identify a crime is committed by, for or on behalf of the corporations are that the crime give benefit to the corporation, the crime is part of corporation’s everyday normal business, and corporation accept the crime.

However if then Article 116 paragraph (2) is associated with paragraph (1) it becomes ambiguous, because it is stated that if the crime committed by a) someone with working relation, b) or with other relations, c) acting the working scope of the corporation, then the penalty is imposed to a) ordering party, b) or the leader in the crime. Article 116 (2) further is concealed arrangement stipulated on paragraph (1), because it states that corporation is not subject to criminal sanctions when environmental crimes are committed by persons based on working relationship or other relationships, and acted within its working scope.

Based on theory of corporate criminal liability, one possible ground to be used to attribute criminal liability to the corporation is the doctrine about vicarious criminal liability, where corporation as the principal may be blamed if the offence was committed by someone in working relationship (agent) or acted the crime as part of his working scope within the corporation (Sjahdeini, 2007). If the purpose of the Article 116 paragraph (2) is to explain that in attributing criminal liability to the corporation accepted by this regulation is the doctrine of vicarious criminal liability, then it is necessary to be regulated. However, this paragraph (2) do not do that, it stipulates the opposite situation, if the circumstances are fulfilled, the penalty shall be imposed on the boards not to the corporation. Therefore it is unclear then under what circumstances a crime committed by, for, or on behalf of a corporation may be imposed criminal sanction to the corporation itself.
Another issue pertaining corporate criminal liability as regulated by Article 116 is when a prosecution of criminal offence may be brought against a business entity but under certain circumstances the sanctions can only be imposed to the boards of the directors, will cause ambiguity about the separation subject between the boards and the business entity. Moreover, if Article 116 is associated with Article 118 which explains that: “with regards to the crime as referred to in Article 116 paragraph (1) letter a, penalty shall be imposed on business entities represented by executives authorized to represent the business entities inside and outside the court in accordance with legislation as functional executives.” This provision leads to the understanding that corporation and the boards of the directors are interchangeable in the prosecution and imposition of the sanctions. There will be case where the charge is brought against the corporation but the penalty is imposed to the boards or the other way around, where the charge is brought against the boards but the penalty is imposed to the corporation. This condition can be seen from some court decisions as will be discussed on part three below.

Wibisana (2016) also identifies several problems in the provision about corporate criminal liability stipulated in Law No. 32 of 2009 concerning Protection and Management of Environmental. One of it is regarding the imposition of the penalty as stipulated in Article 119, and Article 98 - 115. Those articles bring the conclusion that corporations may be subject to imprisonment and monetary penalty. This condition is not possible because corporations do not have physical body to be imposed with imprisonment. The most likely penalty to be imposed to corporations, especially corporation with profit orientation, is in fact only monetary penalty.

Regarding the calculation of the amount of fine that can be imposed to corporation, this regulation seems to have limitation on the clarity. This provision appears to be regulated on Article 117, although the provision of this article is very ambiguous as it refers to Article 116 paragraph (1) letter b that is intended for corporate executives and not for the corporation. However, it seems that this article also intends to regulate the amount of penalty for corporation where it is stipulated that the amount of fine imposed to corporation is aggravated one third of the penalty for individual perpetrators.

In addition to monetary penalty, Article 119 explains that some additional penalty or disciplinary measures may be imposed to corporations. Article 119 stipulates some additional penalty for corporations are: a. seizure of profits earned from the crime, b) closure of business and/or activity wholly or partly, c) repairing the impact of the crime, d) requirement to do what has been neglected without any right and/or e) placing the company under custody no longer than three years. Article 119 explains that the additional penalty is facultative, not mandatory. Though, Sjahdeini (2017) argues that it will be more effective to impose additional penalty as compulsory for corporation, so corporation do not only impose with fine but also with compulsory additional penalty. For example, fine coupled with announcement of judge’s verdict will bring more shamming effect to the corporation.

**The Implementation of Corporate Criminal Liability in the Environmental Cases**

This paper examines four environmental crime cases committed by PT. Dongwoo Environmental Indonesia (PT. DEI), represented by Kim Young Woo as President director (*Indonesia v Kim Young Woo*. Supreme Court Verdict No. 862 K/PID.SUS/2010), environmental crime committed by PT. Adei Plantation & Industry (PT. API), represented
by Tan Kei Yoong as regional director (Indonesia v PT. Adei Plantation & Industry (PT. API). Supreme Court Verdict No. 2042K/Pid.Sus/2015), environmental crime committed by PT. National Sago Prima (PT. NSP), represented by Eris Ariaman as president director (Indonesia v PT. National Sago Prima (PT. NSP), Pekanbaru High Court Verdict No. 27/Pid.Sus/2015/PT.PBR), and environmental crime committed by PT. Kallista Alam, represented by Subianto Rusid as director (Indonesia v PT. Kallista Alam, Supreme Court Verdict No. 1554 K/Pid.Sus/2015).

PT. DEI is company engaged in the management of liquid waste of hazardous and toxic substance (B3), established since 2001, in North Cikarang, Bekasi. PT. DEI convicted to dispose B3 substance without proper processing to an unoccupied land in Sempu Hamlet, Pasir Gembong Village, North Cikarang, causing the surrounding community to experience headaches, dry throat, chest tightness, stomach nausea and vomiting. Supreme Court Verdict No. 862 K/PID.SUS/2010 decided at April, 7th 2011 convicted PT. DEI guilty of committing “continuous environmental pollution.” Imposing a fine of Rp. 650 Million (USD 48.5 thousands), subsidiary criminal confinement for 6 (six) months. Besides primary penalty, PT. DEI also be imposed with additional penalty in the form of seizure of the profits and closure of the corporation.

Next is PT. API, which is doing palm oil plantation business in Pelalawan and Bengkalis, Riau Province. They are alleged to commit environmental crime as dumping the creek for land expansion and forest burning to prepare the land. This action has caused extensive forest fires and resulting smog that pollute the air beyond its pollution threshold, damage the soil chemical, biological, physical properties, and damaging the aspect of flora. The Supreme Court decided that PT. API guilty of committing criminal offence “because of its negligence resulting in exceeding the environmental damage criteria standard.” Supreme Court punished the company to pay fine as much as Rp.1,5 Billion (USD 111.3 Thousands) and additional penalty in the form of recovery the environmental damages as much as Rp.15,1 Billion (USD 1.1 Millions).

Next case that I want to examine is Indonesia v PT. National Sago Prima (PT. NSP). PT. NSP is a business entity engages in agriculture, forest utilizing, and utilization of non-timber forest products in industrial plantation forest in Riau Province. They are alleged to conduct land preparation by burning the forest and deliberately allowing fire that cause soil and environmental damages. PT. NSP found guilty committing environmental crime “because of its negligence resulting in exceeding the environmental damage criteria standards.” Sentence the company to pay fine as much as Rp.2 billion (USD 148.5 Thousands) and additional penalty in the form of obligation to provide adequate facilities of forest burning prevention and control system under the supervision of Meranti Environmental Agency for 1 year.

The last case that I analysed is Indonesia v PT. Kallista Alam. PT. Kallista Alam is plantation and agriculture company, mainly palm oil plantation, located in Kabupaten Nagan Raya, Kecamatan Darul Makmur. They are alleged to commit land preparation by burning and deliberately allowing the fire to occur repeatedly and continuously, resulting in soil and environmental damage. From the trial hearing, the judges convicted PT. Kallista Alam for committing environmental crime of clearing the land for palm oil plantation by destroying the environment continuously. Sentenced the company to pay Rp 3 Milyar (USD 222.7 Thousands).

Of the cases described above, will be drawn some important notes. The first is
about basis for attributing criminal liability to the corporation. Although Article 116 of Law No. 32 of 2009 is not really clear in describing which doctrine or standard to be used to attribute criminal liability to corporation, from the cases that has been examined can be concluded that judges sometimes adopt vicarious criminal liability and identification doctrines. For example in PT. DEI case, the judges explain that the conduct of disposal hazardous waste by PT. DEI is based on the order of production manager and is known by Kim Young Woo as president director. Knowledge possessed by Kim Young Woo as president director who also can be called as directing mind of the corporation, about the criminal act implies that the crime also desired by the corporation so that the liability can be attributed to the corporation.

Moreover, the standard of profit gained by the corporation resulted from the criminal conduct is also adopt by the judges to attribute corporate criminal liability. For example in PT. DEI case, judges assert that monetary advantages gained by PT. DEI by disposing hazardous waste without proper processing and procedure may imply that the corporation is indeed desired by the corporation and committed for the benefit of the corporation. Therefore, corporation as legal person may be subject to criminal liability.

Another standard adopt by the judges to attribute criminal liability to corporation is negligence to prevent and or negligence to take necessary action to prevent the occurrence of the crime. The judges in PT. NSP case adopt this standard to attribute criminal liability. The judges state that lack of adequate facilities of forest burning prevention and control system provided by the corporation has resulted in widespread and unstoppable forest burning. Although PT. NSP do not cause the fire and PT. NSP has made effort to stop the fire but the attempt failed. Thus the judges in the opinion that the offense is not a deliberate conduct, but negligence to prevent the occurrence of fires and negligence to prevent the spread of the fire. This standard also adopts in PT. Kallista Alam case, where the judges state that the lack of equipment to prevent the occurrence of land fires shows a low concern for the threat of land fires, either commit deliberately or due to negligence resulting widespread of the fire. Furthermore, the judges explain that Environmental Protection and Management adopts the principle of prudence, with recklessly managed the plantation and that the defendant’s staff were unable to extinguish the fire, the judges assured that the land clearing has been done by land burning.

Further discussion will be about the separation of corporate criminal liability and boards of directors or individual criminal liability. In PT. DEI case, the defendant is Kim Young Woo as president director, but in the decision, judges sentence the corporation with penal fine and if the penalty cannot be paid then it is substituted by a confinement of Kim Young Woo. There is no discussion about the separation of legal subject between the corporation and its board of directors as individual legal subject. It seems that they are perceived as the same and interchangeable legal subject. In my opinion, it is inappropriate to confuse these two subjects as the same, where they may be penalised for the liability of the other legal subject. If in this case the judges adopting identification doctrine where the actus reus and mens rea of its directing mind can be attributed to the corporation, they should state it clearly. Based on identification doctrine, corporation can be criminally liable and be imposed criminal sanction. However in the verification in the trial both subjects must be tested individually in the fulfilment of criminal elements.

If in the case of PT. DEI corporation is also sentenced where the defendant, subject that is prosecuted and charged is the natural person inside the corporation, contrarily
circumstance occurs in PT. API case. In this case the defendant from the beginning is PT. API as legal person, represented by Tan Kei Yoong as managing director. PT. API found guilty for negligently resulting in exceeding standard criteria of environmental damage. Supreme Court punished the company to pay fine as much as Rp.1.5 Billion (USD 111.3 Thousands), if the fine is not paid it is substituted by a confinement of Tan Kei Yoong for five months. In this case Tan Kei Yoong who from the beginning never tried in the court as the defendant, can replace criminal penalty imposed to PT. API. The judges perceive corporation and its board of directors as the same legal subject. Therefore, if the corporation is unable to fulfil its obligation to pay the fine, its representative can substitute it with confinement. This understanding is very dangerous for legal certainty and is violation of human rights.

Cases above have indicated that there is a lack of clarification of the judges in determining the liable subject when crime committed within the corporations. Judges tend to perceive corporation as interchangeable with the board of directors. This interpretation is erroneous considering the corporation is a different subject from the board of directors or management. They should be prosecuted and proven their guilt on their own name. It is unfair to convict a subject guilty for a crime without fair trial or examination of their involvement in the occurrence of the crime. Judges tendency to perceive corporation as interchangeable with the board of directors is persuaded by very minimal and unclear regulation about separation of criminal liability for corporations and board of directors as already discussed earlier of this paper.

This situation is exacerbated by the absence of criminal procedure law for corporations. It adds the complexity of the problem about criminalizing corporation in Indonesian criminal law. This can lead to injustice of the rights of the subjects involved, either individual subject or the corporation. Therefore it is very urgent to provide regulation about criminal procedural law for corporation; not only their obligations, but also their legal rights, when they become suspects, defendants, victims, or witness of the crime.

In PT. Kallista Alam case, in addition to criminal proceedings PT. Kallista Alam is also a defendant in civil case with Reg. No. 12/Pdt.G/2012.PN.Mbo filed by Ministry of Environment. Law No. 32 of 2009 concerning Protection and Management of Environment enables law enforcement by enabling various lawsuits, administrative, civil or criminal lawsuits. Although it is stipulated that employing criminal law in environmental cases still comply with ultimum remedium principle which requires the enforcement of criminal law as the last resort after the implementation of other laws is considered unsuccessful. The identical subject, object, locus and tempus of the act raise the discussion about the possibility that PT. Kallista Alam has gone through double jeopardy or ne bis in idem in the trial. Article 76 of Indonesian Penal Code stipulates that “except in the case of the judge’s verdict may still be repeated, a person shall not be charged twice for the act which Indonesian judges have tried him with a fix decision.”

Ferdico, Fradella and Totten (2009) assert that double jeopardy principle ensures that a person cannot be prosecuted twice for the same offence where the conviction has gain a permanent legal force and cannot be imposed with doubled sanction for the same criminal conduct. Neagu (2012) states that the principle of ne bis in idem prohibits further prosecution or conviction for the same conduct. Neagu also explains that although the ne bis in idem principle seems simple, but there are many problems that can arise in applying
this principle. For example, what basis is used to determine a charge is the same (idem), whether by definition or classification of crime committed (in abstracto) or on the basis of identical of legal facts in the case (idem factum, in concreto); whether the scope of this principle refers to one state jurisdiction or applies internationally, whether the scope of this principle applies only to double prosecution in the realm of criminal law or include administrative, civil or out of the court settlements. In PT. Kallista Alam case, the discussion is about the scope of ne bis in idem principle whether only in criminal law or also includes other settlements.

Generally the ne bis in idem principal applies only to criminal proceeding; it does not apply to other legal settlements. For example in European Union, Neagu (2012) affirms that parallel proceedings with administrative or civil proceedings are permitted. The same standard also applies in the United States, as explained by Ferdico, Fradella and Totten (2009). Even in the United States double jeopardy principle does not prohibit parallel State and Federal prosecutions if the criminal conduct violate Federal and States regulations simultaneously.

In PT. Kallista Alam case, judges who decide the case (Judges Agung Surya Jaya, Agung Margono and Agung Suhadi) have correctly applied this principle. Where the judges affirm that the meaning of “a person cannot be charged twice” according to Article 76 of the Penal Code is only applicable in criminal proceedings and not applicable to other proceedings. They confirm that parallel civil proceedings and criminal proceedings even though the object, subject, locus and tempus of the crime are identical is legitimate and does not violate the principle of Ne bis In Idem.

Regarding the form of sanctions imposed by judges to the corporations that commit environmental crimes, mostly in the form of fine. Some cases provide also some additional penalty like seizure of the profits and closure of the corporation, recovery the environmental damages, provide adequate facilities of forest burning prevention and control system under the supervision of Environmental Agency for certain period of time. Singer and Fond (2007) assert that justification of a criminal penalty is the interaction between the desire to deter the perpetrators and other corporations to do the same conduct in the future, or to rehabilitate the perpetrator); so not only serves as retribution, which explains that the perpetrator has conduct immorally so it must be punished to compensate his immoral conduct.

Conclusion

The enforcement of criminal crime committed by corporation is still developing. The existence of some cases discussed above is highly appreciated although the regulation about corporate criminal liability is still unclear stipulated on Law No. 32 of 2009 concerning The Protection and Management of Environmental. Judges in attributing criminal liability to corporation adopt vicarious criminal liability and identification doctrine. Besides, judges also employ some standards such as standard of profit gained by the corporation resulted from the criminal conduct and negligence to prevent and or negligence to take necessary action to prevent the occurrence of the crime. It is can be said that the judges are flexible enough in attributing criminal liability to corporation in accordance with the facts of the case.
However, there is a lack of clarification of the judges in determining the liable subject when crime committed within the corporations. Judges tend to perceive corporation as interchangeable with the board of directors. This interpretation is erroneous considering the corporation is a different subject from the board of directors and is dangerous for legal certainty and is violation of human rights.

Regarding the form of sanctions imposed by judges to the corporations that commit environmental crimes, mostly in the form of fine. Some cases provide also some additional penalty like seizure of the profits and closure of the corporation, recovery the environmental damages, provide adequate facilities of forest burning prevention and control system under the supervision of Environmental Agency for certain period of time.

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UNETHICAL BEHAVIOR INTENTION: DOES LOVE OF MONEY MATTER?

Nur Annizah Ishak¹, Roza Hazli Zakaria & Nurulhuda Mohd Satar

Abstract

Sociological and psychological researches suggest that attitudes guide individual’s thinking and action. In this study, we explore the meaning of love of money and investigates to what extent the meaning of money for individuals, possibly quest unethical behavior. It is an urgency to understand behavior incidents from economics behavioral perspective. Studies suggest greed, lifestyle and personal financial pressure are the most leading motivation for fraud, deception, corruption and bribery cases in Malaysia (KPMG Malaysia, 2013, 2015, MACC, 2013, 2016). Thus, this study attempts to examine the relationship between money attitudes and behavior through examine the love of money attitude by using Malaysian samples. The result suggests with the opportunistic attitudes, they possess higher love of money and could be transmitted into unethical behavior.

Keywords: Love of Money, Attitude, Unethical Behavior and Intention.

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1. INTRODUCTION

In modern economy, money is a commodity and is important commodity to fulfill human needs through economic transaction overtaken the requirement of ‘double coincident wants’. Money serves roles as economic transaction which fulfil three important roles, which are; 1) medium of exchange; 2) store of value - something that is expected to retain its value
in a reasonably predictable way over time and; 3) unit of account - the thing that goods and services are priced in terms of, such as currency.

Literatures show money guide individuals’ behavior and consequently affects individuals’ wellbeing and society contentment. Greed, lifestyle and personal financial pressure, debt, living over means are the most leading motivation for fraud, deception, corruption and bribery crime (KPMG Malaysia, 2013, 2015, SPRM, 2016). In Malaysia, indicators of household debt are showing an increasing trend, household debt to GDP ratio rose from 68.8% in 2006 to 76% in 2010, to 84.4% in 2016 (Bank Negara Malaysia, 2017). Year 2012 and 2013 indicate the highest growth of household debt with 5.8% and 7.0% respectively. Even worse, when various studies highlight that most Malaysian are living beyond their means and are accrued with higher debt. Consequently, majority of them went to bankruptcy even at young age. Number of bankruptcy in Malaysia rose from 19,575 people in 2012 to 97,215 in September 2016 with 25,581 were youth aged between 25 to 34 years old. They went bankrupt as early as graduated from university due to incapability of managing their financial needs. Failure to service their vehicle loan, personal loan and housing loans are the main reason for bankruptcy with 26,801, 22,153 and 18,819 cases respectively (Malaysia Department of Insolvency, 2016 and Utusan Malaysia, Dec 7, 2016).

On the other hands, in this capitalist economy, people are chasing on goods and services. It drives people to become more materialistic, individualistic and definitely utility or profit oriented, and money is the main apparatuses to fulfill all the needs. Thus, as money become more vital commodity, there is possibility for individuals to embrace a love of money (LOM) and this ‘money attitudes’ later guide individual behavior, either positive or negatively. Consistent with crime economic theory delineates how individual may commit crime due to the financial gain or because of expected economic gains (Tang, 2013).

We argue that, money may induce crime as crime is always a result of solid motivations and opportunities. People that fall in love with money will seek more of it, as though they can never get enough because money represent status, power, control and privileges to them. They chase money for the sake of more money or perhaps to keep ‘ahead of the Joneses’ or at least to be at par with them (Lemrová et al., 2014; Luna-Arocas & Tang, 2015; T. L.-P. Tang & Chen, 2008; Thomas L.P Tang & Sutarso, 2013; Thomas Li Ping Tang & Chiu, 2003).

On the urgency of understanding the issue, especially in Malaysia contextual, this study investigates to what extent the meaning of money for individuals, possibly quest for unethical behavior. In other words, how would desire for money or love of money (LOM) leads to unethical behavior? This study highlights the love of money (LOM), due to money properties may prompt unethical behavior especially financial crime such as theft, stealing, corruption, fraud, deception, robbery and others.

2. LITERATURE REVIEW

The LOM defines as the universal desire for wealth and this concept emerges from the ‘Money Ethics Scale, (MES)’, (Tang 1992). The LOM measures individual’s subjective feelings about money or subjective attitudes towards money in different ways. As discussed earlier, the meaning of money is highly related to personal perceptions and thus will
influence individual behaviors. In other words, money attitude is multidimensional and it has the capacity to influence individual behavior (McClelland; 1967, Tang; 1992b, 1993, 1995).

The earliest notion of LOM can be traced back as early as in 1920. The newspaper - Otago Daily Times, in September 11\textsuperscript{th}, 1920 published an article claiming that the LOM is the root of all source of evil or mischief actions (based on Adam Smith’s book, ‘The Real Wealth of Nation’). The writer argues that LOM is the roots of conflict and chaotic of society in twentieth century civilization due to money delusion. People would jeopardize others just to get more money. Labor has been discriminated by the producer, the borrower been discriminated by the lenders, just to create more money and possession. Everyone love money and want to make more and more money (Constant Reader, 1920). In the same spine, various researchers have found that people’s attitudes towards money affects their motivation and behavior (Luna-Arocas & Tang, 2015; Tang, 1992; Tang & Liu, 2012). Money attitudes influences not only on action but also on the way of thinking of an individual (Simmel, 1997).

Numerous researches show that LOM is important in affecting one’s behavior especially in societies that are inclined to social comparison regardless of occupations (professor, students, employees or managers) in various fields of study (law, sociology and political science), in various cultures (US vs Spain vs China etc.) and nation’s growth (developed vs developing vs undeveloped), even across gender (male vs female), race (Caucasian vs African-American), age (young vs adult) and employment status (full-time vs. part- time). All findings conclusively conclude that it is their love for money (LOM) that leads to dissatisfaction and not their income, especially in settings where social comparison is important.

Tang & Sutarso (2013) unlimited wants with limited resources, desperation and opportunity would induce crime especially acquisitive crime or crime that is associated with financial gains. This may happen in any tier of social hierarchy due to the practice of social comparison that exists at every different level of society. They find that people that have higher temptation and LOM are significantly related to unethical intentions (theft, corruption, and deception). In conclusion, money is just like an opium, it is an addiction. Obviously, money affect individual’s behavior base on how individuals perceive money. Motivation and opportunity are the perfect match for higher probability of crime behavior (Coleman 1992, Tang 2016, Chiu 2003).

Tang et al. (2015) They postulate for people in the rich countries, lower ethical values affects the corruption and dishonesty behavior. Abundant money, wealth, resources, and opportunities exist, thus develop a high sense of envy toward the rich. Many high LOM managers cannot resist the temptations and take risk of dishonesty. On the other hand, due to scarce resources and opportunities in poor countries, corruption is a way of life. Since almost all people in the society are corrupted, to some extent; they go with the flow and become corrupt. The probability of getting caught in poor countries is also relatively low. It is speculated that society in developing countries consider money as more important due to status anxiety, privileges, availability of new products and services in the markets.

These two studies conclude their hypothesis of how culture may affect the desire for LOM in their previous study (Tang; 2006). In those studies, they hypothesize an individual’s
emotion and attitude (want to be rich) is the most important component for LOM. People in individualistic cultures such as the western have higher LOM compared to collectivistic culture; such as the eastern. These studies share the same findings of theory of ethical decision making by Kish Gephart’s (2010).

All these findings support the hypothesis that LOM would induce unethical behavior. The desire for money may induce criminal behavior. Most people work for money and want more money even more. When they have achieved the initial goal, subsequently the next goals will be revised and more often than not, the expectation will be raised, in terms of monetary measure. More and more money will be desired. It is their love of money (LOM) that ultimately affects the pay dissatisfaction, not income per se. In addition to that, how they compare themselves to others also matters. Findings also suggest that this is make worst by the fact that the feelings of overpayment are very transitory but feelings of underpayment tend to be stable and difficult to eliminate. (Tang et al. 2005, 2015).

3. METHODOLOGY
Sample

A total of 175 economic students from the prominent university in Malaysia were surveyed. The surveys were administered during class time and anonymity was guaranteed. All students are in senior years with some working experience either full time or part time. There are approximately 300 questionnaires were distributed and 190 collected with return rate of 63.3 percent. After disregarding surveys with missing responses, unengaged responses and outliers the final sample consisted of 175 students. The study used Statistical Package for Social Science (SPSS) version 23 and Analysis of Moment Structures (AMOS) software for data analysis.

Table 1 shows the analysis on the background information of respondents in terms of gender, age, religion, ethnicity, marital status, education and household income. There were 20.6% male and 79.4% female and age between 21.7% age below 20 and 78.3% between 21 to 30 years old. The majority of respondent are Chinese with 45.7% followed by Malay 36.6% and Indian 8.0%. Thus, 41.7% practice Islam, 39.4% Buddhist, 1.6% Hindus while 6.3%are Christian. Majority of the respondents have tertiary education, Degree with 78.9% and Diploma or A-level with 14.3%.

Table 1: Demographic Characteristics of the Respondents

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### Measurement Instruments

**Love of Money (LOM)**

Several scales were used in this study. The nine (9) factors scale of Love of Money (LOM) with 27 items developed by Tang et. al (1992) was used. Respondents recorded their agreement with each statement regarding money with 5-point Likert scale ranging from strongly agree (1) to strongly disagree (5). Higher scores indicate higher love of money. The construct consist of nine factors includes Rich, Motivator, Important, Make Money, Budget, Donate, Respect, Achievement and Power with three items in each scale.

**Unethical Behavior Intention**

In order to measure unethical behavior intentions, the study adapted Unethical Behavior Intention from Tang & Sutarso (2012) and Ainsworth (2006). The 5-point Likert scale ranging from strongly agree (1) to strongly disagree (5) were utilized with provided case assumption, for instance “If you were given the opportunity in your work environment, what is the probability that you may engage in the following activities.” It is a measurement of self-prediction or social control. The construct consist of three factors includes Falsifying, Bribery and Stealing with five items in each scale. Higher scores indicate higher propensity of unethical behavior intentions. In addition to that, the respondents also required to complete their basic demographic information includes gender, age, education, income, occupation and

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<td>RM1001-RM3000</td>
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<td></td>
<td>RM10,001 - RM 20,000</td>
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<td>2.2</td>
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</table>
others. In addition, respondents were asked to share their basic demographic data includes; age, gender, ethnicity, education, income and others.

4. RESULT
Descriptive Statistics

Table 2 shows the mean, standard deviation, reliability and correlations of major variables. Reliability and construct validity results were illustrated in Table 2. Cronbach alpha for both constructs range from 0.8 to 0.9, indicates a good valid measure for each construct. Cronbach alpha for LOM construct is 0.831 and none of the item has dropped because all inter item correlations are smaller than 0.8. Meanwhile, Cronbach’s alpha for unethical behavior is 0.895 and also no item need to drop because all inter item correlation are smaller than 0.8.
Table 2: Mean, Standard Deviations, Reliabilities and Correlation of Variables

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<td>0.423</td>
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<td>-0.080</td>
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<td>0.008</td>
<td>-0.014</td>
<td>0.403</td>
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<td>0.479</td>
<td>0.363</td>
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<td>0.098</td>
<td>0.016</td>
<td>-0.061</td>
<td>0.064</td>
<td>0.007</td>
<td>-0.003</td>
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<td>-0.037</td>
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<td>0.691</td>
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<td>-0.176</td>
<td>-0.033</td>
<td>0.104</td>
<td>-0.026</td>
<td>-0.059</td>
<td>0.042</td>
<td>0.019</td>
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</tr>
</tbody>
</table>

N = 175. Gender: Male = 1, Female = 2
Exploratory Factor Analysis (EFA)

Exploratory Factor Analysis (EFA) is a statistical approach for determining the correlation among the variables in a dataset. This type of analysis provides a factor structure (a grouping of variables based on strong correlations). Table 3 shows the fit indices for EFA for LOM includes the KMO Bartlett test and communalities. EFA makes an initial determination of the underlying factor structures. The initial indices good fit indicates that the observed variables are associated with each latent variable. The result of the EFA is further refined using SPSS Amos to run a CFA.

The EFA were conducted by principal axis factoring. Initially, 27 items were pooled into the regression (3 items each for 9 constructs). Several well-recognized criteria for the factorability of a correlation were used. After the refinement process, the final EFA consist of 6 factors encompasses RMI, ACPW, RSPW, BUD, DON, MKS items. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.870, above the recommended value of 0.6, and Bartlett’s test of sphericity was significant ($\chi^2 (351) = 4155.187, \rho < .05$) (see Table 3). The communalities were all above 0.3, further confirming that each item shared some common variance with other items.

Table 3: KMO and Bartlett’s Test

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | .870 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 4155.187 |
| df | 351 |
| Sig. | .000 |

Table 4 below indicate the total variance explained of the LOM model. The initial eigen values showed the model could explain 70.82% of variances. The first factor explained 9.87% of the variance, the second factor explained 3.328% of the variance, the third factor explained 2.45% of the variance, the fourth factor explained 1.4% of the variance and the fifth factor and sixth factors explained 1.09% and 0.95% respectively.

Table 4: Total Variance Explained - LOM

<table>
<thead>
<tr>
<th>Factor</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
<th>Rotation Sums of Squared Loadings*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
<td>Cumulative %</td>
</tr>
<tr>
<td>3</td>
<td>2.718</td>
<td>10.068</td>
<td>60.993</td>
</tr>
<tr>
<td>4</td>
<td>1.684</td>
<td>6.238</td>
<td>67.231</td>
</tr>
<tr>
<td>5</td>
<td>1.337</td>
<td>4.953</td>
<td>72.184</td>
</tr>
<tr>
<td>6</td>
<td>1.243</td>
<td>4.604</td>
<td>76.788</td>
</tr>
<tr>
<td>7</td>
<td>.945</td>
<td>3.501</td>
<td>80.289</td>
</tr>
</tbody>
</table>
Similarly, principal axis factoring was conducted for EFA for unethical behavior. Initially, 15 items were pooled into the regression (5 items each for 3 constructs) but left with 12 after the refinement process. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.807, above the recommended value of 0.6, and Bartlett’s test of sphericity was significant ($\chi^2 (55) = 1707.139, p < .05$) (see Table 5). The communalities were all above 0.3, further confirming that each item shared some common variance with other items.

Table 5: KMO and Bartlett’s Test

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | .807 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 1707.139 |
| df | 55 |
| Sig. | .000 |

Table 6 below indicate the total variance explained of the model. The initial eigen values showed the model could explain 75.09% of variances. The first factor explained 54.16% of the variance, the second factor explained 12.95% of the variance and the third factor explained 8.0% of the variance.
Table 6: Total Variance Explained - UEB

<table>
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<tr>
<th>Factor</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
<th>Rotation Sums of Squared Loadings^a</th>
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<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
<td>Cumulative %</td>
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<td>56.375</td>
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<td>1.095</td>
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<td>4</td>
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<tr>
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<tr>
<td>11</td>
<td>.060</td>
<td>.541</td>
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</tr>
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</table>

Extraction Method: Principal Axis Factoring.

^a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

Confirmatory Factor Analysis (CFA)

The confirmatory factor analysis (CFA) was run for the whole model to evaluate the model’s fit. The CFA results showed a good fit between measurement model and data ($\chi^2 = 940.144, df = 517$) with CFI = 0.916, GFI = 0.775 and NFI = 0.833 and TLI = 0.904 scores respectively. While RMSEA = 0.078. The result of CFI, TLI and NFI exceeded their acceptable levels being above 0.90 except for GFI close to 0.9 (0.829). Figure 1 shows the final measurement model for the study demonstrating a good fit to the collected data and this suggests proceeding to assess reliability and validity of the measurement model.

Figure 1: Measurement Model (CFA)
Reliability & Validity

The study shows higher level of composite reliability (CR) than the suggested level of 0.70 (Hair et al., 2006), scoring from 0.815 to 0.940 showed the items very related to the construct suggested in the model. Convergent validity establishes the relationships of the
measured variables within each construct. The convergent validity index common in CFA is the use of the Average Variance Extracted (AVE) and it is meet when the AVE is greater than 0.5 (AVE > 0.5) indicating that the item holding more variance than error (Hair et al, 2006). Table 7 indicates that the model has a good convergence validity and achieved discriminant validity. Composite Reliability is considered the common procedure used in SEM for evaluating reliability.

Table 7: Reliability and Validity

<table>
<thead>
<tr>
<th></th>
<th>CR</th>
<th>AVE</th>
<th>MSV</th>
<th>ASV</th>
<th>Ste</th>
<th>RichMotImp</th>
<th>AchievePower</th>
<th>RespecctPower</th>
<th>Bud</th>
<th>Don</th>
<th>MakeMoney</th>
<th>Fal</th>
<th>Bri</th>
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<tr>
<td>Ste</td>
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<td>0.320</td>
<td>0.063</td>
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<tr>
<td>AchievePower</td>
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<td>Bud</td>
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<td>Don</td>
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<td>-0.052</td>
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<td>MakeMoney</td>
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<td>0.121</td>
<td>-0.047</td>
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<td>Fal</td>
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<td>0.407</td>
<td>0.091</td>
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<td>-0.030</td>
<td>0.006</td>
<td>0.020</td>
<td>0.760</td>
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</table>

5. DISCUSSION: SEM

The full structured model shows excellent goodness of fit with relative chi-square value of 72.404, RMSEA of 0.042, GFI of 0.949, CFI of 0.979, TLI of 0.961 and NFI 0.949. All of GFI, CFI, and NFI exceeded their acceptable levels being above 0.90. The badness-fit indices RMSEA were 0.042 which is below of the threshold 1.0. They are within the ranges recommended by Hair et al. (2011) and Holmes-Smith (2006). The fully structured model indicates presence of absolute, incremental and parsimony fit.

Based on Figure 2, all the variables of LOM show significant and positive relationship with the constructs. For example, for estimates ‘respectpower’ (β = 0.850; ρ = 0.003) means 0.9% increase in this item due to 1% increase in LOM. However, analysis shown there is significant causal relationship between love of money (LOM) and unethical intention for Bribery (β = 0.201; ρ = 0.15). The rise of 1% in LOM may increase the Bribery for 0.2% in the population. While the rest were not, including Falsifying (β = -0.07; ρ = 0.565), and stealing (β = -0.087; ρ = 0.652).

Figure 2: SEM Model (all)
This study attempts to investigate the relationship between love of money (LOM) and unethical behavior. We used convenience sampling which does not reflect a real representative of the Malaysian population. Furthermore, the sample in this study were University students, thus they are not the real workforce individuals and may not have ultimate urgencies for economic living such as owning properties, saving or financial assets. All these could be factors of weak relationship between LOM and unethical behavior for ‘Falsifying’ and ‘Stealing’.
Nevertheless, we found ‘Bribery’ has a positive and significant relationship with LOM. Increasing of LOM may increase bribery case in the population.

In terms of limitation, the research measures only the propensity for unethical behavior and not the actual unethical behavior. Thus, the result should be carefully interpreted in this light. The research also did not observe through various disciplines of management, thus should not be generalized on that basis. The main limitation of this type of research is the ‘social desirability’ issue. Especially in Malaysia that synonym with ‘eastern culture’ that concern on good, warm, kindness and hospitality, respondents may give on focus on ‘socially acceptable’ behavior rather than their actual responses or behavior.

6. CONCLUSION

This study examines the relationship between ‘Love of Money (LOM)’ and unethical intention behavior. It is to understand the concept of money attitudes – LOM as it is multidimensional concepts and has the capacity to influence individuals’ behavior. Through analysis we found all the six variables which are RMI, ACPW, RSPW, BUD, DON, MK$ are positive and significant for LOM construct. In short, the attitude of want to rich, in power, to be respect, budget, donate and to make more money are the crucial elements of LOM.

Moreover, this study examine how LOM is capable to induce unethical behavior, from attitude and behavioral framework. We test three unethical behaviors that only prompt to higher financial returns which are ‘Bribery’, ‘Falsifying’ and ‘Stealing’. Nevertheless, only ‘Bribery’ shows a positive and significant relationship with LOM. Increasing of LOM may increase bribery case in the population. However, the findings of all existing studies provide conclusive evidence that LOM may prompt unethical behavior especially in an organizational setting. Ironically, the motivation to acquire the means of getting goods and services (money) has led to obsession with money; spreading greed and lust that ultimately endorses unethical behavior. In short, the possibility of obsession towards the ‘power of money’ may prompt criminality.

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POSITIVE ACTION IN SHAPING A BETTER WORLD: AN ANALYSIS OF THE MUSLIM HISTORIOGRAPHY FROM SAID NURSI'S PERSPECTIVE

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ABSTRACT

Historical events occurred due to interconnection between social science approach to the coverage of events involving complex economic affairs, political, social, religious and so on. According to Abdurahman Heal (1999), methods of historical research using systematic rules and principles for collecting historical sources effectively, evaluate it critically and ask a synthesis of the results achieved in the written form. As described Nugroho Notosusanto (1971), there is four-step method in history of activity, namely Heuristic (step of collecting as much relevant historical sources with a paper discussed), source criticism, interpretation and methods of historiography (history writing). This study will directly focus on several main objectives: 1) To examine the life of Said Nursi and the scope of the history of his life during the days of the Ottoman empire, 2) Evaluate the process of writing and interpretation of history which is applied by Said Nursi in the Risalah an-Nur based on length of his life in the last days of the Ottoman Empire 3) Analyze positive action in the writing of history based on the theory and methodology of writing from the his viewpoint. The study found that Said Nursi have a positive approach to the writing of history from various aspects especially with the issues associated in the social sciences.

Keywords: Said Nursi, Positive Action, Muslim Historiography.

1. INTRODUCTION: A CONCEPT OF HISTORY AND MUSLIM
HISTORIOGRAPHY

History regarding etymology (šajaratun) that means a tree, thus in Arabic language history are refer as tarikh. History are also claimed for it origins from from Greek words ἱστορία, historia, meaning "inquiry, knowledge acquired by investigation", is the study of the past, particularly how it relates to humans. History is the science and study of the past, particularly how it relates to human. History, is a branch of science that is closely associated with all the events and chronology of events and experiences, behaviors, events as well as events in the life of an individual, a leader, an institution, organization, country, or society. All events that ever happened to a person or an organization and so treated as belonging to the past life.

According to al-Masoudi, a Muslim historian during 10M said that knowledge of history is a record of the accumulated knowledge of the entire human, and a noble science. E.H Carr also said that history is a process of continuous interaction between the historian and the facts, an endless dialogue between the present and the past. According to Ibn Khaldun, it is clear that history is a record of human society, or civilization of the world, about the changes that have occurred in the nature of society, such as rudeness, friendliness and sense of camaraderie of a group with the others; about revolution and rebellion of a group of man against each other to lead the formation of the government and the country. The study of history, formally recognized as a science, as a discipline that is based on theory, understanding, philosophy and methodology. The uniqueness of the subject of history can be seen when it is always stimulating people to continue questioning him about the situation, as well as its historical position in the hope of benefit or the benefit thereof. Since history can and often receive special problems, then it can also give you a specific answer.

According to Nugroho Notosusanto, there are four methods of history, namely Heuristic (level of collecting as much as relevant historical sources with a paper to be reviewed), source criticism, interpretation and methods of historiography (history writing).

1.1 Historiography and the elements of Historical Writing

In the tradition of Islamic scholarship, science of history is considered as one of the religious sciences ('ulam an-naqliyyah) because in the beginning it is closely related to the science of hadith. However, after the tradition of developing and writing the history

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of science has been established, the history that is both authoritative reassessed as part
of the religion, and is no longer considered adequate to convey the facts of history as it
is not capable of displaying all the facts as a whole due to the limited ability of human
memorization. Thus, the new developments in the writing of history as the history of
science began to separate from Hadith which broader methodology, and grow up to be
a field of its own, namely historiography. Writing of history that also known as
Historiography in terms of knowledge of history, used to refer to the last step of the
method of historical research, the process of writing obtained in the study of history
into a story that is ready to be read readers. The process of drafting the findings of
historical research it is also often referred to historical reconstruction process with the
assumption that past as actuality is a construction as a result of social processes in all
its complexity in the human community. Therefore, the term often used to refer to
the historiography of the research and writing of history.

The study of historical writing is actually a description of an event or characteristic of
the individual, then this will make the process whereas a person can understand the
events or characters concerned. The writing of history are started due to several factors.
First, because of their historical awareness about the past, the facts either its true or
vice versa, as well as history clearly shows. Typically the sense of awareness was
driven by religious interests, beliefs or personal, which existed in a society and
civilization. Second, it was written as an assessment of the living conditions of the
people who normally would have thought ideas and actions in different aspects of life,
based on the geographical and cultural differences. This makes the historian who
wrote the history of Islamic Historiography will record a historical event by subjective,
in terms of both viewpoints, and methods used in the writing of history, so that later it
gave birth to a variety of flow in the writing of history. Thirdly, scholars in Islamic
history both of old and new collectively agree that the aim of the study of history is to
draw historical lessons. Since the background historians who come from different
regions, eventually it gave birth to the writing of history that have methods and
distinctive writing style, so it formed two forms of various schools of historical writing
until now.

1.1 The Stages Of Muslim Historiography’s Writing And Development Of
Historical Styles From The Origin Of Islam To The 19th Century.

Muslim historiography development or the study of historical writing in Islam begins
with the establishment of several medresse in several locations of the earliest
development of Islam thus forming method of writing riwayah and dirayah. The
earliest historical narration begins from the city of Medina, for example, with narration

196 Yusri Abdul Ghani Abdullah (2004), Historiografi Islam dari Klasik hingga Moden, Jakarta : PT Raja Grafindo
Persada, p. 3.
dan Pustaka, p. 22.
199 Fadila Grine et.al. Islamic Historical Writing: A Critical Analysis, Middle-East Journal of Scientific Research
that is influenced by the ideology of Islam, with his work leading the life history of the Prophet (Sirah al-Nabawiyah) and war (al-maghazi) that was joint by him. Resources used for the writing of the history of Islam is the Quran and Hadith and as the discipline of writing gives a great emphasis on authentic sources, whereas the source of the poem is not used at this time. The methodology of the early history of Islam has been investigated using riwayah methods, in focusing on making a record of events through the chain, and criticism of the narrators, without examining the contents of a written text. At this stage, the initial growth of historical knowledge among the Muslims mixed with the science of hadith in terms of sources and methods, so that subsequently the writing of hadith and history are separated among scientists and historians, to make sure the authenticity of the hadith.

In Yemen, the writing of the history of Islam influenced by local political trends and mixed with tribal elements are written in the story without the selection process and research. If in Iraq, the Islamic historical writings tend to write history based on resources drawn from poetry and took the story from the source text (sanad). Among the famous historian of the first century are Urwah ibn al-Zubayr, Muhammad ibn Muslim ibn Shihab al-Zuhri (d. 124 AH / 741 CE), Al-Tabari in his book *Tariikh al-Rusul wa al Muluk*. The methodology used in the early days of Islam during the Khilafat-Guided Caliphs until the time of the companions of the Prophet, known as a method of history. Next came the method of writing history with chronological approach that became known as annalistic history, written by years. Writing the history of historiography using riwayah continues and grows up with civilization. When the rule of Islam widespread in various areas, so each nation's culture influence each element of historical writing.\(^{200}\)

Muslim historiography development then continued with the process of writing with sociological approach, with a methods of dirayah, initiated by al-Mas‘udi (896-956M), and reached its peak in the writing of Ibn Khaldun. During this period is no longer defended the method of writing isnads like before. \(^{201}\) The study of muslim historiography with dirayah methods is focusing on the direct knowledge of a rational interpretation of terms and other terms. This method of writing requires historians to pay attention to the experience and direct observation of the events that took place at that time. In addition, Badri Yatim commented that this method gives great attention to the description of social events in its history, the culture based on the principles and laws of development of society. These method are developed as early as the century-4H / 5H with written historical fact based on the reality of human activities around them, the habits of thinking in a particular way or sometimes vary according to factors that affect their lives such as geography, climate and social life. The historian who developed this method, among others, al-Mas‘udi(w. 345 H) in his book entitled *Muruj al-Dzahab dan al-Tanbih wa al-Isyraf*,\(^{202}\) Ibn Miskawayh (w. 421 H/1030 M) with his


\(^{202}\) Al-Mas‘udi and his written work is recognized as the first to use this method dirayah has brought reforms to the methods of analysis and writing of Islamic historiography. He became the first Muslim historians apply the writing of history by conducting research on the history and geography, through the social culture of the local communities
books *Tajarib al-Umam wa Ta'aqub al-Humam,*\(^{203}\) al-Biruni and Ibn Khaldun with his great contributions in his book al-Muqaddimah.\(^{204}\)

The study of writing in muslim historiography is growing with both methods until up to the 20th/21st century, historians have improved a number of concepts that are relevant to the subject of their study. This is known as interdisciplinary or multidimensional approach that characterize "scientific" history, where a uses of variety social science concept allows a problem to be seen from various dimensions.\(^{205}\) A debate by historians on the progress of the muslim historiography development as above, had mooted the idea of writing this article to examine the historical events that occurred during the life of Bediuzzaman Said Nursi, the process of writing and interpretation of history which is applied by him through his book Risalah an-Nur based on length of life when he was in the days of the Ottoman empire, thus analyzing positive action in its approach based on the idea of writing in a critical, scientific and objective ways.

2. Said Nursi And Idea of History During The Collapse of The Ottoman Empire

An eminent scholar of Islam, Bediuzzaman Said Nursi, was born village of Nurs, a Kurdish village in the Bitlis Vilayet (province) of the Ottoman Empire, in eastern Anatolia, it was why he was known with his name “Nursi".\(^{206}\) He was born in 1293 and grew up under the care and tutelage of the best of his parents, Mirza and Nuriye, and because of that he grew up to be a man of great character. He has traveled and studied by scholars until he was also the one who mastered many disciplines, intelligent, and it has shown in his writings of Book of Risalah an-Nur where his thought was interpreted by his mature style, with a beautiful metaphor. Said Nursi described as a scholar who has an uncanny ability to master the various disciplines, such as Tafsir, qira'at, hadith, fiqh al-din, comparative jurisprudence, history, linguistics, theology, science, and debate. Moreover, he is not only an expert in religious sciences, but he was also very impressive in the science of logic (mathiq).\(^{207}\)

In addition to many scientific fields which he explored, the works of Said Nursi Bediuzzaman excerpt greatly admired by scholars and researchers. He received his early education from both her parents, and her brother was also among the first teachers studied. He also devised a new method in the narration of history by using thematic patterns (al-Tarikh al-maudhu'a Hasb), which renewed the previous writing style pattern that uses the style of writing hāwiyat (chronological approach is based on the historical events in order of occurrence). This new style of writing that have a significant impact on the writings of later historians, especially Ibn Khaldun. See al-Mas’udī-Historian Of Civilisations, retrieved at www.iais.org.my/e/attach/al-Mas'ud%20Historian.pdf.

\(^{203}\) Ibn Miskawayh through his work was more concerned with the moral and philosophical, and had great attention to political issues, with a view to find out the happenings surrounding the kings and ministers. Even in view of the 'Effat al-Sharqawi, Ibn Maskawhay sometimes in his present things that seem trivial, but it contains a larger debate.


\(^{205}\) Franz Rosenthal (1968), A History of Muslim Historiography, Leidin : E. J. Brill.


\(^{207}\) Sukran Vahide, Bediuzzaman Said Nursi (1992), Istanbul: Sozler Publications, p.34
for him. Among his teachers that he studied formally was in 1882 in the village Thag, with Sheikh Muhammad Amin Afandi, and Shaikh Nur Muhammad Sayyid al-Kafrawi, Shaykh justified Abdul Rahman, Shaykh Fahim, Mulla Abdullah and others. He then continued his studies at the Madrasah Mir Wali Hasan, and also in Madrasah Bayazid studied under Shaykh Muhammad Al-Jalali. He had started studying at a very young age with a very prominent intelligence so that he memorized the Quran from his early stage of life. From there Said Nursi was moved to Bitlis in 1888 and enrolled him in the school of Sheikh Amin Afandi. Then he later learned more in school Hasan Mir Wali in Mucus and in Waston (Kawasy), up to the school in Bayazid, one of the areas belonging to the province of Agra. This is where Said Nursi learn religious knowledge base, because before that he only learned Nahu and Sharaf only. In Bitlis, he started to have the opportunity to examine a large number of scientific books and memorizing a portion thereof.

Said Nursi personal excellence as a scholar and reformer not only visible from one side, but he was one of the scientists who lived during the last days of the Ottoman Empire, from the reign of Sultan Abdul Hamid II until the time of Mustafa Kamal al-Attarturk. During the administration of the governments involved, Said Nursi also have a live experience in participating in the First World War and the emergence of modern Turkish Republic, so that this situation makes him as an observer and an official writer on the events taking place in Turkish society during the period. More over, Risalah an-Nur as a Bediuzzaman Said Nursi’s works in particular have been written by two different phases of his life, based on experience and current events that occurred during the period of his life. The first phase of his life is known as the Old Said phases, namely the 1921M 1877M year, the time period is a period of his experience with the administration of Sultan Abdul Hamid II (1876-1908), the shared experience of the Party wa al-Itihad al- Taraqqi (Party of Union and Progress) (1908-1918), the Allied occupation (1918-1923). While the second phase of his life is as the New Said phase, which began in the third 1926-1950M and in 1950-1960M with the experience in facing of Republican People’s Party (1923-1950M) and Turkish Democratic Party (1950-1960). Risalah an-Nur is one of 600,000 risalah written in his 8 book collection, which is written in a different location, for example, a commentary entitled "Isyaaratul I’jaz" was written while he was in the battle field in the Caucasus and Eastern Anatolia during the First World War. The other risalah such as "The Words" is written in 1929, "The letters" in 1932 and in 1934, after that he then began to write the first to eight flashes, and "Tenth Matter", "al-Salamaat "and “al-Shu'aat". "Damascus Sermon" among his famous works, is part of that prescribe" six words "taken from the pharmacy of the Quran as the remedies for" six dire sickness ". The theme of the

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208 ibid, p.30
212 Afsal VV (2015). Islamic Thought in India and Turkey: A Comparative Study of Shaykh Ahmad Sirhindi and Bediuzzaman Said Nursi, Phd Thesis at Jawaharlal Nehru University, India, P. 164
speech was that the Muslims should not be hopeless people by imitating and following the ideologies of the west.\textsuperscript{213}

Kitab Risalah an-Nur to be one of the greatest works of Said Nursi and referred to Islamic scientists in various disciplines so far. This book was written with the scientific method, is the allegorical interpretation of the al-Quran or the quest for its hidden, inner meanings and it sometimes offers detailed accounts of specific historical events, and it often emphasizes the moral significance of an event over its narrative sequence, clearly. Since then, the existence of this book until now has been re-issued/re-printed several times in Turkey in the form of a summary, and also translated into Arabic, German, Urdu, Italian, French, Russian, Romanian, Bulgarian, Persian, Kurdish, Malay-Indonesian and Central Asian language.

2.1. The Concept and Interpretation of History By Bediuzzaman Said Nursi

In Islamic sciences, all knowledge of the religion comes back to two sources: the Quran and the sayings and doings of the Prophet Muhammad - the traditions, and there is always a colleration within the science of history itself, as already discussed above. Bediuzzaman Said Nursi have started life with his scientific study of the Qur'an and hadith, and his life seems to have close links with the science of history and the concept of scientific history. His comments on the historical dimension is called by the writings of Muhammad Baqura as follows:

“While I read Rasail Nur, I discovered the importance of the historical dimension during the period of the "Old Said", however, Said Nursi attention to the historical dimension is not the main thing, but the second point, (tab'i). Said Nursi did not write the history books, but the historical material is present in his writings. His knowledge of history are wide, while he was in Van he is not just studying various sciences, but he also learned a science of history.”\textsuperscript{214}

Although he does not appear to give special engagement/directly in the production of scientific papers on the science of history, Said Nursi still gives his thoughts on the meaning of history itself, as reviewed by Muhammad Baqura, namely:

“According to Said Nursi, history is not a group or a stack of events and phenomena associated with each other between physical causes (material) without a destination. But according to him that history is movement of people throughout time are always controlled by iradat (God is the foundation of everything) that interfere with a variety of means to help men and guided them to find clues and kindness. Therefore, prophecy is God's divine mercy allotted to man in the light of the history of their lives. The essence of history is the mission of the prophets. For this reason, the history of the prophets in general, and the history of the Prophet Muhammad is typically a

\textsuperscript{213} Ibid., P.160

\textsuperscript{214} Muhammad Baqur. At-Tarikhinda Badi’ Zaman Said Nursi Dirasahfiat-Tamatsul wa at-Tafsir AL-NUR AcademicStudiesonThought and Civilization (journal). 2013.)
model of history that we always follow, and reacted as a clear indication (mizan maknawi) that we use to evaluate various historical phenomena of the past and current".  

Said Nursi, in his writings insisted that he would only underwrite any news to those who narrates, but he did not want the comments made by his rational mind in clarifying any issues. He also presents different views of the transmitters by collecting it and then write it in the narrations, but the authenticity of history is also imposed upon the narrators. However, Said Nursi have expressed different views with the ayat-ayat mutashabihat (the ambiguous verses) as examples of traditions associated with the deceiver of al-Dajjal (an evil figure in Islamic eschatology). He did not deny the Dajjal with his nature depicted in Sahih Bukhari and scriptures and other books with characteristic peculiarity for example that his right eye will be punctured, and his left eye would be raised to his forehead and will be sparkling like a star. Only the believers will be able to read the word 'Kafir' [disbeliever], inscribed in bold letters, on his forehead, there will be big mountains of smoke at both front and backsides of his caravan, people will anticipate food within those mountains, during the severe famine and excess for him to all parts of the world except Mecca and Medina, but for history that happened during Said Nursi’s life, he had given different reviews about Dajjal portrayed in his day, that refers to Mustafa Kamal Attarturk, which Said Nursi see that the rule of Ataturk is similarly with the incarnation of the al-Dajjal who has always acted wrongfully in the earth as follows;

I deliberately hiding part of Rasail Nur associated with the arrival of the Dajjal (As-Sufyani) in the lives of Muslims with the hope that it will be distributed after death. But since the government employees entered the bedroom and check my house until they found the collection of Risalah an-Nur and because of Attarturk, I was jailed in Isparta, then moved to a prison in Denizli. Even when I was sick to think of the fate of Rasail Nur after the imprisonment, but God willed otherwise. Apparently, Isparta and Denizli prison of darkness turned into a bright place with guidance Rasail Nur. Nearly all prison inmates read Rasail Nur and became a devoted disciple for Rasail an-Nur. This is the interpretation of the meaning of the verse 216 of Surah Al-Baqarah:

(وعَسَى أنْ تَكرهوا شَيْئًا وَهُوَ خَيْرٌ لَكُمْ)

"But perhaps you hate a thing and it is good for you; and perhaps you love a thing and it is bad for you.”  216


Within the context of the historical writing study, Said Nursi may apply both methods of writings, namely riwayah methods and dirayah methods. Since that Said Nursi did not have a history book, and if anything that can be categorized as a history book within the collection of Rasail Nur, then it is refers to al-Mukjizatal-Ahmadiyyah. Nevertheless, Said Nursi wrote this book without referring to historical sources directly, but with the strength of his own memorable. In the book "al-Mukjizatal-Ahmadiyyah," he used riwayah and dirayah methods, where Said Nursi start each miracle of the Prophet Muhammad by saying the word روَى which means "narrated" or words روَى فَلَان - narrated by religious authorities, or with ملكأ meaning "so and so narrated," if he mentioned a riwayah that was narrated by the Prophet Muhammad’s companion. He then explained the wisdom and life lessons from history. Here's an example:


In addition, there are also comments from Prof Dr Imad Khalil stating that Said Nursi in his writings about Rasulullah S.A.W cross far beyond the techniques of writing based on the writing of history, even to say he was applying methods tadabbur istidlali really dominated him in most of his risalah, including history and Sunnah. His method is shown clearly in the preamble in "al-Mukjizatal-Ahmadiyyah";

“Allah Almighty, the most Compassionate, and it is clearly evident through the compilation of this brochure. I convey to the readers so that they are aware of and take into account: the sentence to 31, 19, which discussed onto Risalah Ahmadiyyah; that it never occurred to my heart to write this risalah. Its suddenly happened when my heart starts to have strong encouragement, and I start lifting the pen when my memory is weak and not as sharp as ever as a result of oppression and misfortune, I need to mention that I do not use narrative technique of hadith as usual like, "So and so said..." or "it is said like this." Besides, I do not have a reference either in the books of hadith nor books of history. Nevertheless, I determined, 'I trust in God,' and I began composing this with with full trust. That's how Allah gives his Mercy on me with a strong memory and gives me an information that exceeds the power of memorizing of Said Qadim (Old Said). With that, a 30-page chapter can be written very quick within 4 hours, even 15-pages of it was completed in one hour. Most of its resources come from the books of hadith such as Bukhari, Muslim, Sufism, Tirmidzi, "As-Shifa" by Qadi Ayyad, Abu Naim, At-Tabarani and others. My heart skips a beat and nervous each time when I have wrote a wrong hadith—perhaps because of my sin, but thanks to Allah, all of it written correctly and legally. Therefore, we believe that the divine is always part of our aid and the need for this Risalah is very high. Therefore, if there are errors in any hadith pronouncement and the name of the narrator, then we beg for an apology and with a big hope that our brothers and sisters could correct the mistakes."

This shows that Said Nursi also use the books of hadith in his writings, though it came from her memory, such as Sahih Bukhari, Sahih Muslim, Dalail an-Nubuwwah by Imam Baihaqi, Syuab al-Iman and the Book of Sunan Al-Baihaqi, al-Mu'jam al-Kabir and al-Mu'jam as-Shagir by Imam At-Tabrani, al-Shifa ala Huquq Mustafa al-qadi by Qadi 'Ayyad, and others. In addition, he also refers to the history’s book like Sirah Nawabiya Ibn Hisham.

For Quranic interpretation and commentary, Said Nursi will shows some examples from related surah, to invites people to reflect, think and observe the signs around them and it became part of the foundation and elaborates his idea of historical facts. These verses are:

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Said Nursi, al-Maktubat, Istanbul: Sozler, p.256. See also Prof.Dr.Imaduddin Khalil dalam tulisannya “Ar-Rasul Saw dalam Rasail Nur”, Persidangan Pembaharuan pemikiran Islam di abad ke 20 dan Badiuzzaman Said Nursi” yang bertempat di Istanbul, 24-26 September, 1995
Moreover, in surah Al-Insan, verses 30 became the basis for Said Nursi in a statement that the divine will is the basis of every historical phenomenon, although men are the perpetrators of history. Divine destiny is powerful in determining the will of man. The verses are:

﴿وَمَا تَشَاء ونَ إِلَّ أَنْ يَشَاءَ الله  إِنَّ اللهَ كَانَ عَلِيمًا حَكِيمًا﴾.الإنسان:٠٣

It's clearly shows that Said Nursi makes al-Quran as the main reference in implementing the philosophy of history and he has found to explained many lessons from history in the Quran. Research on historical records in the Holy Qur'an and finding their traces is very effective in understanding the authenticity of the Qur'an. In addition, being involved in exploring the past would provide a good background to take lessons from the past on which the holy Qur'an in the following verses to persuade us to do so:

"Have they not travelled in the earth and seen how was the end of those before them? They were stronger than these in powers..." (30:9)

"Indeed there have been examples before you; Therefore travel in the earth..."(3:136)

3 Positive Action Taken By Said Nursi in Writing History Through Risalah an-Nur

As a world war looming, the Ottoman Empire, which was originally an Islamic state leading in terms of geopolitics, culture and ideology, has been divided into several main areas, thus leading to an increase in the Middle East Western powers like Britain and France and led the creation of the Arab world modern and the Republic of Turkey. The involvement of the Western powers in addition to the country with the intent to destroy Islam, has resulted in Muslim countries who can overrun it became destabilized and the Muslims fell under the rule of non-Muslims. in order to maintain their power, the Western powers had to change the education system, the legal and constitutional in most Muslim countries they conquered.219 Said Nursi's life period when the empire collapsed of Ottoman Empire gave him a live experience in the evaluation of historical events, and it turned him to reacted aggressively in defending Islam and Muslims faith at that time to return for the right path of Islam.

The current situation that is taking place in this historical event has commented by Sydney (1959) as the cycle of history. He supported the comments of several other historians, which among other things stated that the historical cycle has a close relationship with the history of a country, such a society of ancient Greece who believe that a nation or a civilization, always having the cycle, with the history of a symptoms repeatedly, that an event occurred repeatedly in successive cycles. 220 Political development of the country is a symptom that causes them to take a view and feel that


220 Ibid., p. 39
from time to time there are events that will occur over and over again, with the same characteristics. They believe that the events that happened at a time can occur at different times; either at the time or period in the future. Therefore, they feel there may be lessons to be drawn from such an event. The process cycle also shows that the sustainability of a country is always circulating in one round of the never-ending; he began, flourished and then collapsed, and after it started anyway. It is a trend that moves on the rails of history and as time passed, it was a historical event.221

3.1 POSITIVE ACTION IN HISTORICAL WRITING: AN ANALYSIS TOWARDS RISALAH AN-NUR BY SAID NURSI

Said Nursi also see that something is happening within her life is a journey of a life filled with lessons and aim to achieve good and lasting happiness, so any adverse events experienced and seen in his life is always seen in a positive light. Positive action taken by Said Nursi in approaching an historical events during his life gives an evident that he showed the interest and awareness of the function of history and its importance as an element that is essential in life. Among the positive action taken by Said Nursi is as follows, for example;

i. **Examining a positive side of those who believe in Allah**

For a description of the oneness of a slave toward his Creator, Said Nursi states that humans have many needs and requirements. As he craved beautiful gardens in the world, it's certainly more long lasting gardens in the hereafter. As he wanted to see his friend, he had the same desire, even an exaggeration to see and feel the unity of God, the owner and The Most Powerful. For Said Nursi, only one of which can meet all the needs of human being, that Allah Almighty The Sustainer, who has everything. Nursi said explained that those who have faith in Allah, his aimed in life is constructed in a good way, living in servitude system and believes in oneness of Allah. Those people are always controlled by sensitivity that provide coolness in his heart. He believes that everything that was created will goes back to Allah. He believes that everything in the governance of God's all-wise. Therefore, it is always see life in a positive outlook. It will not perform any act contrary to the values of faith that knows only one God, Allah.

ii. **Historical events are not split between the concept of nature and life**

Said Nursi considers that history is inseparable from the concept of nature and human life as a whole. In fact, he classifies that the perpetrators of human history is the men itself, of which it is the essence of its mission last prophet but decisive in the history of the event itself is God. He also commented that the change history from one phase to another phase is to give guidance and lessons to the human being as it was stated with the ayat- afala yataffakarun.

iii. **The purpose of history is aimed for freedom and justice**

He considers that the content of historical events are certainly aims for freedom and

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221 Ibid.
justice in book of universe. Each doctrines are suitable for all ages and period in human life. He then also commented that disunity and hostility prevailing in society is returned to the Jews, where Abdullah bin Saba', is the pioneer of fanaticism and racism. For example, Umar and Uthman was killed as revenge was the same event with the conflict occurred within Shi'ites and Sunnis, because the issue of racism.

iv. Develop a hope and gives a good news

It is the nature that every human being has hopes and dreams. Hope is an optimistic attitude of mind that is based on an expectation of positive outcomes related to events and circumstances in one's life or the world at large, whereas it can establish clear goals, imagine workable multiple pathways toward those goals, and persevere, even when obstacles get in their way. For a Muslim, hope must be something that comes from the heart, to be considered in a rational sense, and knowledge of the Allah The Most Compassionate. Every human being is endowed a nature and a desire to know Allah, and from a young age, they are taught by the environment arounds them that provides an understanding that Allah is Allmighty and have a painful doom, meanwhile they also need a bless from Him from time to time. Therefore, Rasail Nur are constantly developing our hopes and dreams, rather than to inculcate despair, the good news and not bad news, and Rasail Nur reflect about those who fear Allah like a baby who missed the warmth of his mother's arms with full of love. It is a reflectain from the grace of Allah with his ar Rahman-ar Rahim. From his explanations, its shows that hopes and dreams will only be present when a person has knowledge of the power of Allah over His servants destiny. This indirectly gives them a confidence that a success will not become a reality unless they strive to achieve it. This is because the law of Allah is established that the providence of Allah will not given for those who deny an importance of effort, and indeed Allah will not squander the reward of those who do the best job.

There are many statements of the Qur'an and Sunnah which insists on Allah’s promise to those who believe, and do good in search of victory and success. Among them are;

“And those who strive for Us - We will surely guide them to Our ways. And indeed, Allah is with the doers of good.

Surah Al-Ankabut:verse 69.

In order to make hope a reality, people are encouraged to do as much good in life. This is because the basic "Rules of Life", every human being who does good to others certainly will be rewarded well. Just when and how goodness is rewarded is the secret of Allah. Some have found their kindness repaid in the world with happiness and affection of a loved one, success in terms of career, education, wealth, children and so on. But there are also some good response that might be found at a later date, sometimes it just becomes a secret of Allah Almighty, as a reward in the Hereafter.

God as the ruler of the universe and the scourge of natural disasters such as the first world war, earthquake, tsunami, tornado, lightning and burning. All it reminds the people that complacent so stay away from arrogance and vanity. In addition, it is a reminder of the Creator in the understanding of the nature of God that had been shunned. Therefore, the wisdom of God, nature, justice, power, grace and discretion clearly. However, rebellious man with a mask of the devil and refused to acknowledge God and the warning signal of this divine universal. They said, “This disaster is natural events, explosion minerals of the earth, the incident happened, electrical contact with the sun's heat that cause electrical malfunction during 5 hours and the air, the red light in Qastamoni looks as if it goes on”. That's the illusion for those who are not brilliant. Multiple ignorance born of delusion and arrogance born of people who reveal Islam and hide their disbelief (zindiq), close their eyes from the fact that indeed is the divine nature.

vi. “Said Nursi are very confident that the mission of dakwah of Risalah an-Nur in building human civilization based on the Quran and the Sunnah will prevail over time, proof of the earthquake that occurred whenever Risalah an-Nur has questioned in court”.

When Rasail Nur attacked in court with a baseless argument, accusing that Rasail Nur was trying to destabilize the security of the State, there was a powerful earthquake and devastating fires happened, I am convinced that this tragedy is not accidental. Therefore I believe that implementing the teachings Rasail Nur in life can prevent a disaster of this country.

vii. Do not see the calamity that befell him, as his life in prison is a tragedy, but as a virtue, and also be a prelude to the birth of the care of the poor people who mistreated until it becomes the inspiration of the birth of the new Islamic Countries.

Although the condition is severe you in jail, the prisoners of war is frightening, mass media fabricates stories full of lies, poisoned mind, heart felt crushed, groaning feelings of sadness, prison staff pessimistic view of this condition. I stated that despite all these things real and true, but for me it is happiness, it is because I was not feeling my own tortured soul. In fact, every time a disaster came in the form of diverse, it comes with a variety of bounce anyway. Yes, I have perfected spiritual lesson in this prison I received several years in a mental hospital, which of course I accept the lessons and wisdom throughout the disaster also. Due sadness of tyranny unfounded, it taught me the meaning of love to the poor and earnestly

222 Al-kalimat, h.197.
223 As-syuuat. 2012. Cairo: Sozler, cet. 6, h. 498
avoid tyranny and deceit. Therefore, this scourge for me is not bitter, but it brings its own delights my soul. I hope it is true that the moans and sadness that comes from the hearts of the saints that were destroyed will be an inspiration of mercy. Thank God, because of the groaning and grief, Muslims wake up and want to escape from tyranny, thus forming a new Islamic states in the Islamic world.224

4. CONCLUSION

Islamic history maintained a close an objective relationship with the rest of the Islamic Sciences. Said Nursi, as one of the great ulama and muslim scholars in his era has shown us a great idealogy of his life and thought, where he exerted himself with extreme compassion in protection of the right of the people to the real life of Islam. In part of science of history, eventhough he did not claimed himself as a historian formally, but the way he expressed a commentary about the situation that happened around him, along his writings and methods that we examine through Risalah an-Nur, it seems that he is part of the member of a historian itself. Said Nursi’s greatest contribution was undoubtedly meaningful in shaping the positive action in developing muslim civilization in here and hereafter. May Allah blessed him with his effort insyaallah.

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THE DYNAMICS INVOLVED IN THE SOCIOCULTURAL MEANING OF FOOD
IN AN INDIGENOUS PEOPLE’S COMMUNITY IN ANTIPOLO, RIZAL,
PHILIPPINES

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ABSTRACT
It is almost common in all culture to hear that “you are what you eat.” What the people eats in a society indeed mirrors its own culture. And food is seen as an important feature or material culture that is embedded distinctly to humans. The decisions, which humans carry out, are in accordance to what he embodies in his culture. Thus, humans have their own understanding of his world. And people adapt to his environment in order to survive. In this manner, man has attached meanings to the particular environment he is into.

The focus of this paper deals with the study of human-environment relationship. The given environment of man has a vital role in terms of shaping his ability to construct systems of meanings, reality, beliefs and worldviews—i.e. culture. Culture is clearly seen as a human’s way of performing his life in order to survive, which is a unique feature perceptible only to humans.

The paper presentation includes the discussion on the physical setting of an indigenous people’s community in Antipolo, Rizal, Philippines, and how these people view his environment in terms of his food procurement. Classifications and their own notions on food would remind us of how Levi-Strauss proposes that humans everywhere think in binary opposites (Levi Strauss in Klages, 2001). There would always be a distinction between favored things and things that are disfavored. This perspective would accordingly be reflected as this paper goes along with the discussion.

In the course of two and a half months of staying with the community, pertinent field techniques were made. Participant observation, conducting of interviews, case studies and most importantly, the so-called, diet recall form were employed in order to provide rich data for the study. Since Rizal province, which is mountainous and covered by the Sierra Madre mountain range, vegetables, rice and root crops are the most commonly food apparent in the community.

Foods considered as edible and non-edible, foods that have social meanings, and foods that are depicted, as their core and secondary core diet would be further explored. The discussion in this paper would reflect that what the people perceived as food and what it is not determines how environment affects humans to view things according to his own construction of reality and in a very essential fact, implying how unique humans are by having its own cultural identity.
1. INTRODUCTION

"You are what you eat" is one of the common clichés that depicts the idea of what the people eat in a society mirrors their own unique kind of culture. It is food that is viewed as a material culture embedded and invested with meanings. Food bears the badge or identity of the people who constructs and attaches the meaning upon it. It thus becomes a symbolic substance for humans.

A significant aspect on food and man’s relationship is the ability of humans to adapt. Adaptability is perceived as a marked feature apparent in humans. As people live in social groups and interact with each other within a given environment, certain aspects of his life need to be constructed to be able to meet the struggles of everyday life.

In order to give light on this matter, the paper will greatly deal with the symbiotic relationship between man and his environment. The given environment of man has a significant part in terms of shaping his ability to construct systems of meanings, reality, beliefs and worldviews, which embody a culture.

For the purpose of understanding the focus of this paper, an ethnographic research on a particular indigenous people’s community found in Sitio Canumay, Antipolo, Rizal province, will be depicted.

1.1 Brief Background of the Research Site

Sitio Canumay is found in San Ysiro, Barangay San Jose and is considered a very remote place in the city of Antipolo, province of Rizal. Going to the heart of Sitio Canumay area is very hard. It is about 30 kms (i.e., 2 to 3 hour-ride) away from the town proper of Antipolo.
The difficulty of going through the place where the community settles includes the rockiness of the road due to sloppy, hillside banks or ravine. The roads are rugged as a result of the area’s physical features. The community thus lacks the accessibility of going to the town proper aside from catching up the scheduled trip of jeeps.

Rizal province is regarded as part of a mountainous region in the Philippines and is situated in the Sierra Madre mountain range that covers the other provinces of Quezon, Bulacan and in northeastern part of Luzon.

Farming becomes the primary means of subsistence. In order to meet other basic needs in life, the people here are also engaged in charcoal making, vegetable planting, wood gathering, and shifting cultivation (also known as slash-and-burn agriculture, or swidden cultivation (Morgan 2000: 279), and has an equivalent Filipino term, which is known as ‘kaingin’.

Figure 2 Philippine map showing the province of Rizal
2. METHODS

In the course of two and a half months of staying with the community, pertinent field techniques were made. The most substantial technique that I was able to employ is the participant observation. I also did interviews, case studies and most importantly, the so-called, *diet recall form*. This was utilized in order to build a summation of the most common foods served in the community. Since Rizal province, which is mountainous and covered by the Sierra Madre mountain range, vegetables, rice and root crops are the most commonly food apparent in the community.

2.1 Research Process

The fieldwork was conducted from January to the middle part of March in 2002. At the time that the research was done, electricity is only powered by using generators owned by private and concerned citizens of Sitio Canumay. Since generators help run the power of electricity for the entire community it can only be used with the defined set of time or schedule. Electrical powers are scheduled to be utilized from six in the evening until eleven o’ clock, or “as soon as the surrounding gets dark,” according to my informant.

2.2 Two Population Groups in the Study

Considerably, an ethno-linguistic group called ‘Dumagats’ inhibits the place. They are said to be from the Negro race and have roots in the Negro type found in the Philippines who are not pygmies (Lebar ed., 1975: 26). They are, as described by Avena, “the semi-mobile Dumagat engage in shifting cultivation on almost barren hills, gathering rattan, and light bamboo in rapidly thinning forests…” (Avena 1988: 58).

The Dumagats in Sitio Canumay today prefer to be called as ‘indigenous people’ simply known as, IP or ‘katutubo’ in Filipino. Thus, the term ‘katutubo’ will be used in this paper to refer to the Dumagats encountered during fieldwork. They choose to be referred to as such because, for one thing, they are no longer wearing G-string (i.e., a string/strip or a piece of cloth worn round the waist and between the legs); rather, they now wear what the lowlanders also are wearing like shorts, pants, t-shirts and the like. They feel that somehow they appeared to be ‘civilized’ or ‘urbanized’. These people also recognized themselves as the “legitimate inhabitants” of Sitio Canumay.

On the other hand, there is also another group of people who settles in Sitio Canumay. They call themselves as “daya”. These people are the non-Dumagat population group who are settlers or migrants who mostly come from the Visayas region. Many of them are from Leyte, Masbate, Marinduque and Aklan provinces that migrate in search of better life, which they think Sitio Canumay can provide because of its rich and wide variety of natural resources.

Avena implies that there is a “population pressure” happened in the Dumagat milieu. To quote this, “Indeed, there is a population pressure on the available natural resources in the Dumagat environment today, but the pressure is not due to the rapid growth of the local Dumagat population; rather, the pressure is due to the influx of non-Dumagat population groups including lowland migrants…” (Avena 1988: 141).
The mixture of these two population groups in Sitio Canumay will afterward depict how they view the kind of environment they share with each other.

The demographic representation of both the katutubo and dayo constitutes a total of 335 individuals based from the census employed during fieldwork. In order to obtain a relatively equal sample of households who will answer or fill up the diet recall form, five households from katutubo was selected and the dayo represented another five. Diet recall form is being filled up once a household member will recall or remember the food they eat at the end of the day. The mealtime is thus monitored/recorded, which covers breakfast (almusal), lunch (tanghalian), snack time (merienda) and supper/dinner (hapunan).

### Table 1 A completed diet recall form

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### 3. RESULTS AND DISCUSSION

A food habit is distinguished as that of an individual trait or experience, and thus reflects individual’s own preference or selection of food (Gifft, et al. 1972: 29 and Lowenberg 1968: 85). It tends to bring individuality in food choices since humans are still unique and different from each other. But, since humans make up the society as a whole, food then and its associated behavior is still treated as a reflection of a collective performance.

Notions on food are depicted on what kind of food is eaten in the community. It is also attached with different and significant meanings—how food is perceived, how food is valued, and how food is conceptualized. The construction of meanings is only a product of human-environment relationship (which maybe of special concern to adaptation) which was uncovered in the Sitio Canumay community.
3.1. How Food is Valued and Conceptualized

The following conceptions on food below show how katutubo and dayo perceived their environment when asked, “What is food and what is not food for you?” and “What is the first thing that will come into your mind when you hear the word ‘food’?”

3.1.1 Food implies vegetables

“Vegetables” is the first thing that the informants told me on what do they mean of ‘food’. Food for them is the combination of rice and a viand that is always perceived as ‘vegetables’.

3.1.2 Food gives life; it also binds people together

The katutubo and dayo appreciate every blessing given to them. A blessing, for them, is something that sustains life. Thus, food for them is considered a blessing—something to be thankful for because they have something to eat. Since food for them gives life, it should thus be shared. Sharing of food involves happiness (“kasiyahan”), satiety/satisfaction (“kabusugan”), and comfort (“kaginhawahan”). A reflection of what enjoyment can bring when something is done collectively—a matter of sense of belonging.

3.1.3 Food is something edible; it should not cause harm

A person’s desirability on a particular food manifests on what he/she thinks is edible for him/her and what is also not. Lowenberg has put it in this way, that “people do eat what they like and what they think is good for them” (Lowenberg 1968: 87). As for the community, what is not food for them is something that can cause harm to the body—i.e, something toxic and poisonous. And this is the way they classify things according to what foods are easily procured in their surroundings. It may also imply that what is considered ‘edible’ in this particular community reveals the kind of value system that their ancestors have constructed and eventually have passed on to them.

3.2. How Food is Obtained: ‘kaingin’, backyard and public market

It is perceptible to humans to make use of his environment in order to respond to his/her everyday struggles in life and thus, be able to adapt. The natural environment of Sitio Canumay provides the community a diverse and wide variety of food. Root crops, tubers, plants and fruit-bearing trees like mango, banana, and other vegetables like cabbage, eggplant and the like are very abundant in Sitio Canumay.

The people in the community practices shifting cultivation or ‘kaingin’ in the forest to plant vegetables in order to make the lands more fertile, to help preserve forest’s complexity and to provide sustained yields (Morgan 2000: 280).

The processes involved in shifting cultivation start in clearing a part of land by cutting the standing vegetables and tall grasses and then burning it after it has had time to dry. Burning is important because it kills parasites, and insects that may cause harm to the quality of crops’
production. Caring of the crops and vegetation in the forest includes a visit of at least three times a week to make sure that the plants are watered regularly and to protect it from wild boar’s (mountain pig) invasion.

However, planting vegetables can also be made very easy to both *katutubo* and *dayo*. Anyone has actually had their vegetables and other root crops planted near the rice fields and most commonly in their backyards or garden. This is for them a way of acquiring their foods so easily.

But when these foods are not available in their surroundings, these people can procure food from the public market, which is in the city proper of Antipolo. Foods like meat, seafoods and basic condiments needed in cooking like sugar, soy sauce, flour, pepper, cooking oil and the like are thus bought in the city which is also known as ‘*bayan*’.

Given the above-mentioned setting on how and where these *katutubo* and *dayo* get their food, two classifications of foods thus have been created.

### 3.3. Categories of Food: A Construction of Binary Opposites

According to Claude Levi-Strauss, humans everywhere think and structure their own worlds (Levi-Strauss in Klages 2001). The ability to classify things is a very unique and distinct feature attributable to man. He can view things according to his own construction of reality and what his ‘world’ has for him.

#### 3.3.1 ‘*Lutong Bayan*’ vs. ‘*Lutong Bundok*’

These *katutubo* and *dayo* have generated their types of foods as, ‘*lutong bayan*’ and ‘*lutong bundok*’. ‘Luto’ means to cook and ‘*bayan*’ refers to a town/city. These foods are those that are purchased from the public market, which is located in town—i.e., ‘*bayan*’. To them, foods like meat, fish, canned foods and bread are what comprised the *lutong bayan*. Special foods or party foods like spaghetti and dishes cooked with beef or pork meat like *menudo*, and something that is difficult to prepare are also regarded as *lutong bayan*.

However, foods that are easily procured from their backyards, vegetation plots, and ‘*kaingin*’ are what they call as ‘*lutong bundok*’. ‘Bundok’ means a mountain; it may also mean forest.

The foods identified here are vegetables like cabbage, eggplant, bitter gourd, root crops, yams, sweet potato, papaya, banana, and the like.

They also have foods considered as ‘indigenous foods’. By this, they mean foods as foods that are very rare and can only be found in forested area.

#### 3.3.2 Core Diet vs. Secondary Core Diet

Considerably, what makes up *katutubo* and *dayo*’s core or primary diet is what they commonly eat and can easily acquire anytime—i.e., *lutong bundok*. On the other hand, the foods classified under *lutong bayan* comprised their secondary core diet.

Core diet of people may refer to the foods, which are considered important, universal, regular, staple and consistent in the form of use (Jerome in Arnott ed., 1975: 92). It is also the most necessary foods to sustain human life (Bennett and Pasin in Guthe and Mead, 1943). To these people, rice, vegetables and root crops are the staple food based from their answers in diet recall form that was utilized in the study.
Whereas, secondary core diet, according to Bennett and Passin, reflects as characteristically part of the diet, does not have fundamental or traditional force compared to the core foods and is an accessory to the staple diet only (in Guthe and Mead, 1943).

4. CONCLUSION

Food and foodways are understood in its deepest cultural context embodied as depicted in the study of the Sitio Canumay community. The food is vividly seen here as an element attached with meanings that are socially and culturally constructed. It also uncovers facts that are derived from the native’s point of view (i.e., ‘emic’—comes from the katutubo and dayo’s perspective).

Foods can be considered as edible and non-edible, foods eaten can either be procured from the backyard and/or public market or the foods can be classified as ‘lutong bayan’ and ‘lutong bundok’, and lastly, foods can be depicted as core and secondary core diet reveal the human-environment interface.

5. ACKNOWLEDGEMENT

My study would not be made completed without the help of these following people:

a) To the people of Sitio Canumay, especially to the families who have participated in my study during interviews and during the conduct of the diet recall form;

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Public Relations for Vocational Higher Education in Indonesia

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Abstract— Vocational education can take place at the secondary, post-secondary, further education, and higher education level; and usually interact with the apprenticeship system. At the post-secondary level, vocational education is often provided by highly specialized company, technical schools, community colleges, colleges of further education, universities, institutes of technology/polytechnic institutes. In Indonesia, vocational higher education degree is still considered as second level education if it compared with the bachelor degree. The paradigm of people and industry should be changed according to the high demand of skillful workers. It needs very specific public relations strategy programs to pursue better image and more enthusiast to fullfil the revitalization of vocational-based higher education that was declared by the the President of Republik Indonesia, Joko Widodo. Historically, the practice of public relations within universities has been one-way, asymmetrical (Pirozek & Heskova, 2003). In the past, practitioners have a great deal of emphasis on media relations. In recent years, scholars have advocated a strategic approach to university public relations that moves beyond media relations and embraces strategic management, twoway symmetrical communication, and various other excellence principles. The methodology approach used in this research is quantitative and qualitative (sequentially hybrid). The objective is to get answers of the most effective strategies that suit the needs of universities (higher education), specifically vocational higher education colleges. This ongoing research formulates the best strategies that can be done by public relations in vocational colleges, such as: high school roadshow and digital branding through prominence ambassadors. These results will continue to grow, resulting in other strategies along with the development of this research.

Keywords: public relations, vocational, higher education
I. Introduction

Public relations is the strategically focused two-way communication to achieve a certain goal. PR department plans and implements strategies to inform and gather support for the relevant public. The role of public relations in building knowledge societies is also sensitizing citizens and create a positive social climate for the acceptance of new programs and projects in the wider public, as well as ensuring the active participations of target public and the construction of the positive publicity, which allows PR in proactive action to prevent the emergence of conflict situation (Mitrović & Drača, 2010).

PR in higher education is different than PR in other industries. While the fundamentals of public relations at colleges and universities are similar to those at other organizations and businesses, there are unique challenges for higher education PR professional. Every college and university is a vast resource of faculty experts on a wide range of topics. To maximize the breadth of opportunities, PR should understand each of their perspectives and contributions in their field of expertise. Making time to meet in advance and stay in touch regularly ensures everyone is better prepared for breaking news opportunities (Pierce, 2015).

The differences about PR in Higher Education works, such as; 1) Different departments, where each department within an institution acts individually, rather than collectively — presents a challenge for PR Different departments also have different agendas, making PR a delicate balancing act. 2) Different audiences, Administration, alumni, athletics, faculty, parents, and students all have their own needs and expectations for communications. However, it’s also important for PR pros to identify their shared interests. Ultimately, comprehensive PR plans for colleges and universities must take into account all audiences — internal and external (Pierce, 2015).

The strategic integration of PR in higher education can support the mission, raise the profile, and contribute to the success of colleges and universities. This involves understanding, managing, and leveraging what makes each institution different. Moreover, this is vitally important in an increasingly competitive higher education market.

In Indonesia, One of the agenda discussed in the National Coordination Meeting of Education Public Relations (Perguruan Tinggi Negeri, Dinas Pendidikan Provinsi dan Kopertis), on Puncak, West Java, 17-19 July 2008, is about the role, function and position of Public Relations at State Universities (PTN). Almost all Public Relations officials who attended complained about the not optimal role and function as a manager of communication and information to the public. Similar complaints also often arise at meetings held by the Public Relations Association of Indonesia (Perhumas) and the Government Public Relations Coordination Agency (Bakohumas).

Public Relations officials complain about the same lack of access to information, lack of appreciation for the PR job, unclear position of public relations in the organizational structure, unavailability of work guidelines as standard procedures, to the inadequate budget to carry out their duties. Vocational higher education as the part of this universities also faces the same problem in the Public Relations duties, probably harder because the image of diploma program and misunderstanding of the audience and stakeholders.

Vocational education can take place at the secondary, post-secondary, further education, and higher education level; and usually interact with the apprenticeship system. At the post-secondary level, vocational education is often provided by highly specialized company, technical schools, community colleges, colleges of further education, universities, institutes of technology/polytechnic institutes.

Data from Kementerian Riset, Teknologi, dan Pendidikan Tinggi (Ministry of Research, Technology and Higher Education) RI on August 2017, Indonesia currently has 4,529 universities, but only 5.4 percent are in the form of vocational/ polytechnic colleges. "If other countries that have good economic and industrial growth have the majority of at least 50 percent of all universities are vocational colleges," said Director General of Institutional and Science and Technology Directorate Patdono Suwignjo when opening Australia - Indonesia ASEAN Symposium on Wednesday (23/8) in Building 2nd floor Kemristekdikti, Senayan, Jakarta. It can be concluded, that vocational education is essential for Indonesia as development country. Vocational higher education is very important in a developing country, like Indonesia. it is important to note that good vocational training can play an important role in economic development and reducing poverty. Also, there is certainly sufficient need to change current structures and functions. The question that should be asked, however, is under what circumstances can vocational training make a
positive contribution. The orientation towards economic development is certainly necessary in principle (Langthaler, 2013).

Cited from The Guardian, developing countries could minimise skills mismatches by placing greater emphasis on TVET (Technical and Vocational Education Training). Vocational education tends to result in a faster transition into the workplace, and countries that have it at the core of the curriculum – such as Germany, Switzerland, Austria and the Netherlands – have been successful in maintaining low youth unemployment rates. In Indonesia, vocational higher education degree is still considered as second level education if it compared with the bachelor degree. The paradigm of people and industry should be changed according to the high demand of skillful workers.

The emerging Vocational Higher Education needs very specific public relations strategy programs to pursue better image and more enthusiast to fulfill the revitalization of vocational-based higher education that was declared by the President of Republik Indonesia, Joko Widodo. Historically, the practice of public relations within universities has been one-way, asymmetrical (Pirozek & Heskova, 2003).

In the past, practitioners have a great deal of emphasis on media relations. In recent years, scholars have advocated a strategic approach to university public relations that moves beyond media relations and embraces strategic management, two-way symmetrical communication, and various other excellence principles. The objective of this research is to get answers of the most effective PR strategies that suit the needs of universities or vocational higher education colleges.

II. Theoretical Framework

A. Public Relations of Higher Education

Modern PR leaders begin with the institution’s mission and vision, building plans that connect the university’s goals with the needs and interests of the public. They are connectors, and trusted partners. They are deep listeners and strong advocates. They stand for something, both at the decision-making table and in representing the university to the public (Melichar & Brennan, 2017).

From the review of the literature of practice, higher education public relations practitioners reveal that public relations officers themselves do not fully understand their roles (Dozier & Broom, 1995; Hale, 2001; Phair & King, 2001). One possibility of why this is the case is the result of role conflict or role ambiguity with the emergence of higher education marketing, branding and advertising trends and strategies (Hale, 2001). In the review of the literature of practice, experts in the field argue that public relations officers cannot expect to achieve a “seat at the table” where they can influence stakeholder relationships unless they perform both roles. Public relations officers, especially, must execute the managerial role in such a way that top management will understand their value and demand it when making organizational decisions (Broom & Dozier, 1990; Grunig, Grunig, & Dozier, 2002).

The five-factor model (DeSanto et al., 2007; Moss et al., 2005) is the identified theoretical model to be used for this study. This model used to see whether PR of Vocational Higher Education has done the ideal program and evaluate to see the best and the most effective program that suit the vocational higher education. The five dependent variables: key policy/strategy advisor, monitor and evaluator, trouble shooter/problem solver, issues management expert and communication technician (Whittaker-Heck, 2014).

The key policy and strategy advisor is described as the public relations practitioner who has a strong relationship with senior management within their organizations and have an active part in the policy-making process (DeSanto et al., 2006). The second factor was monitor and evaluator, described as one of the four managerial dimensions of the five-factor model. The dimension reflects managerial responsibility for “organizing, controlling, and monitoring... the work of setting targets with top management, operating within budget, monitoring performance against targets, preparing departmental reports... and negotiating for organizational resources and commissioning of external agencies” (DeSanto et al., 2006, p. 12). The third factor tested for model fit was trouble shooter/problem solver, described as one of the managerial dimensions of the five-factor model. The trouble shooter/problem solver dimension “represents practitioners’ responses to the way they treat internal or external challenges, threats and or
crises confronting the organization…and are generally acknowledged to be the organization’s designated “firefighters” (DeSanto et al., 2006, p.13). The fourth factor tested for model fit was issues management expert, described as one of the managerial dimensions of the five-factor model. The dimension “relates to the public relations practitioner’s role in diagnosing and responding to external threats from major or minor issues…and may be recognized as the organization’s external ‘eyes and ears’” (DeSanto et al., 2006, p. 12). The fifth factor tested for model fit was communication technician, described as the technical dimension of the five-factor model. Unlike the previous dimensions that fall into managerial ranks of an organization, the last dimension or factor—communication technician—“falls into the technical or craft side of practitioner activity….namely writing for the media and for newsletters, handling events and dealing with the media” (DeSanto et al., 2004, p. 191).

B. Factors Affecting The Decision Making

Hawkins, et. al (2004) state that there are two main factors influencing decision making, ie external factors consisting of culture, sub culture, demographics, social status, (Reference group), family (family) and marketing activities (marketing activities), and internal factors consist of perception, learning, memory, motives, personality, emotions and attitudes as key determinants of buying decisions.

In its development, according to Kotler (2004) also explained more broadly that there are four main determinants that influence the consumer purchase decision namely:

- Cultural factors consisting of: culture, subculture and social class,
- Social factors consisting of: reference group, family, role and status,
- Personal factors consisting of: age and stage of life cycle, occupation, economy and lifestyle personality and self-concept
- Psychological factors consisting of: motivation, perception, learning, beliefs and attitudes

Based on some opinions mentioned above it can be concluded that in general there are two main factors that influence a person in buying goods or services that external factors that can not be controlled and internal factors coming from within the consumer itself. This is evidenced by the results of research conducted by Hossler, et al (1985), Chapman (1981), Freeman (1999), Cambera and La Nasa’s (2000) using several consumer behavior models found that demographic factors, socio-economic background, gender, family career background and individual characteristics of students influencing college selection decisions.

External Effect

a. Relative Educational Cost

Price or cost of education to be spent not only can be judged from the high side of low, expensive or not, but can also be seen from the other side that is on how ability, perceive and feel the cost incurred associated with the feasibility, ease and properness in accessing the college A certain height. Thus the results of the assessment is very dependent on the economic ability, conditions and patterns of assessment subjectively by associating for example with the possibility of the value or quality to be received, affordability tuition fees, the fairness of tuition fees and so forth. To arrive at the conclusion of the assessment of the cost of education, various things can also be a consideration such as the number and qualifications of lecturers who have, completeness infra structure, services provided, academic reputation, management of managers and so forth. These are related to the cost of education before assessing whether the cost of education is fair or not and so forth. Because this assessment is of course very relative to each person so that the cost of education is called relative education costs. Thus the cost of this relative education can not be interpreted the same as the price used to buy certain products.

On the other hand Schiffman and Kanuk (2007) explain that how consumers perceive a certain price-high, low, reasonable, have a strong influence on buying intent and buying satisfaction. This shows that a consumer judges the fairness of a product or service price depends on how to judge it. On the other hand, consumers also often link prices to the quality of products or services received as suggested by Schiffman and Kanuk (2007) which say that consumers use price as an indicator of quality if they have little information to hold or if they are unsure of their ability Alone to make choices on the basis of other things.
(Shiffman, 2007). But if other cues are available to the consumer such as a brand, or store image, then sometimes it is more influential than price in determining quality. Similarly, proposed by Mowen in Ndaru Kusuma Dewi (2009) that consumers tend to use the price as a quality indicator. Schiffman & Kanuk (1994) and Hawkins, Best & Coney (1995) also say that price is a signal of quality. This can happen if the consumer is difficult to make decisions about quality objectively or by using a brand name or store image (Mowen, 1993). A research conducted by Dodds in Ndaru Kusuma Dewi (2009) states that consumers will buy one branded products if the price is considered feasible by them (Dewa, 2009).

b. Referral Group

The reference group is an individual or group of persons deemed to have significant relevance to a person in terms of evaluating, giving aspiration, or in behaving (Solomon, 2002). Reference groups may also be the form of a person or group that is the comparator or reference of a person in the formation of values, attitudes, or behavior both in general and in particular (Laroche, et al, 1996). In the same sense Peter and Olson (2005) argue that the Reference Group involves one or more people who serve as the basis of comparison between reference points in shaping affective and cognitive responses and expressing one's behavior.

The magnitude of the influence of the referral group on purchasing decisions is evidenced through the research conducted by Bearden and Etzel in (Peter and Olson, 2000), it was found that the influence of reference groups on product and brand decisions varied at least in two dimensions, namely the first dimension related to the extent of a Product or brand is something that is needed or a luxurious object and the second dimension is the extent to which the object being being met is interesting or known to others.

c. Marketing Communication

When deciding on a consumer purchase decision to conduct extensive information retrieval and then process the information as a matter of consideration before finally deciding on a purchase. This shows the important role of communication in supporting the buying decision process, as presented by Henry Assael (1998) as follows:

"Since they provide information that influences consumer's purchase, communications are central to consumer's decision making". For that reason it is not enough for a company to simply develop a product well, offer it at an attractive price, and make it easy for its targeted customers. However, the company must also communicate with existing customers, potential customers, retailers, suppliers, and other interested parties.

There are several sources of information that can help make decisions, Henry Assael (1998) puts it this way:

"To make purchasing decision, consumers acquire and process information from advertising, from their experience, with product, from friends and neighbors, and from others sources". In making purchasing decisions, consumers can obtain information from advertising from an experience of a product, from friends and neighbors and from other sources of information.

Therefore, it is important for every company is not excluded universities to organize marketing communications in helping and directing consumers in order to meet the wants and needs by way of awaken all parties involved in marketing communications to do better by providing information in accordance with the needs and desires of consumers. Moreover marketing communication is also very important to enhance the brand image as proposed by Meenaghan and Shipley (1999) that the importance of marketing communication in improving brand image It is also put forward by Greeff (1996) which more specifically discusses the importance of promotion in building a brand (Engel, 1994).

*Internal Effect*

a. Image
Consumers tend to form an image of brands, stores, and companies based on their inferences derived from marketing and environmental stimuli. Image is the total perception of an object, formed by processing information from various sources every time (Nugroho, 2003).

While the perception according to Schiffman and Kanuk (2004) is as a process where in the process individuals choose, organize and interpret the stimuli into something meaningful. Perception has a very important role in marketing. The image that is in the minds of consumers arise because the process of perception, how consumers assess a service quality is also highly determined by perception, success in positioning the product is also very dependent on perceptions in the minds of consumers.

The image basically consists of 3 (three) parts of corporate image, product image, and brand image. Corporate image has a big role in influencing consumer decision making. When consumers do not have complete information about products and brands, they will use the company image as the basis for choosing products. People sometimes do not like the product.

b. Motivation

The process of motivation occurs because of the needs, desires and expectations that are not met which causes tension (Jeffrey, et al, 1996). Meanwhile, according to Schiffman and Kanuk (2007), motivation can be described as a driving force within individuals that force them to act. The driving force is generated which arises as a result of unmet needs. In a different sentence Supranto (2007) suggests that motivation indicates a reason for a behavior. Motivation is an energetic force that drives behavior and provides goals and direction of behavior (Meenaghan & Shipley, 1999).

While the Motivation Theory by McClelland, stated that humans have three basic needs that can motivate an individual to behave, namely: 1) The need for power is how far the individual wants to control and influence others and other objects that exist in the environment. Individuals who have high-power motives have a strong impetus to direct and change others or events occurring in surrounding. 2) The need for affiliation is the individual's need to gain warmth and establish closer relationships with others. Individuals with high-affiliated motives will tend to be more expressive in expressing their emotions and feelings to others, likes to work with others, like friends and social situations. 3) Needs achievement (needs for achievement), namely the human desire to achieve the best achievement, reputation and career.

c. Attitude

Understanding attitude was originally proposed by Thurstone (1993) where he sees attitudes as one fairly simple concept of the amount of influence a person has over or against an object. A few years later Gordon Allport proposed a broader sense of attitudes: mental and nervousness in terms of readiness to respond, organized through experience and having a directional and or dynamic influence on behavior. The definition put forward the meaning that the attitude is to study the tendency to respond to an object whether favored or not consistently. While Schiffman and Kanuk (2007) suggests in a more or less the same sense that attitude is an expression of feelings that come from within the individual that reflects whether a person Happy or unhappy, likes or dislikes and agrees or disagrees with an object. Similarly, the opinion expressed by Engel, Black Ward and Miniard (1995), who says that attitude shows what consumers like and dislike (Prasetyo & John, 2005).

Basically many factors that can shape a person's attitude, especially related to the attitude of purchasing a product or service. According to Prasetijo, Ihalauw (2004) said that the main sources that influence the formation of consumer attitudes are: 1) Experience. Direct experience by consumers in trying and evaluating the product can affect consumer attitudes toward the product 2) Personality. Family by Kindra, et. Al (1994) is an important factor in the formation of personality and subsequent formation of one's attitude. In that family, one forms the basic values and beliefs. In addition to family, contact with friends and other people around them, especially people who are admired, also influential in the formation of personality and attitudes of a person. 3) Information from mass media. Mass media which is a communication medium that almost every time found consumers can form consumer attitudes.

These external and internal factors of decision making process are the variables of this research. They can be analyzed by using this kind of analytical model:
III. Methodology

A. Hybrid/Mixed Method

The approach used in this research are qualitative and quantitative approach (hybrid method). Some researchers seem quite comfortable with a “hybrid” model including both approaches in one study (Shulman, 1986). This hybrid model could almost be two separate studies, quantitative and qualitative, within one larger study with each approach enhancing and/or complementing the other in knowledge gained on the same research problem, while each remains true to its own identity (Salomon, 1991).

The prospective mixed methods researcher will find a variety of classificatory metrics by which mixed methods research designs can be described. The designs have been differentiated by the level of prioritization of one form of data over the other, by the combination of data forms in the research process (such as during the collection or analysis phases), and by the timing of data collection, such as whether the quantitative and qualitative phases take place concurrently or sequentially, and if so, in what order (Creswell, Fetters, and Ivankova, 2004; Datta, 2001; Johnson and Christensen, 2004; Tashakkori and Teddlie 2003).

This research is using sequential mixed methods, that are data collection strategies involve collecting data in an iterative process whereby the data collected in one phase contribute to the data collected in the next. Data were collected in these designs to provide more data about results from the earlier phase of data collection and analysis, to select participants who can best provide that data, or to generalize findings by verifying and augmenting study results from members of a defined population (Creswell & Plano Clark 2007:121).
B. Qualitative Research

This research uses the qualitative approach. Qualitative method gives more chance to obtain in-depth results (Poerwandari, 1998). The method used to collect primary data is by having in-depth interviews with three Head of Public Relations Division of three established vocational program in three of the best universities in Indonesia. This type of research is a descriptive study. In descriptive research, researchers attempt to show a detailed and specific picture of a situation, social context, or a relationship (Neuman, 2003).

This research uses purposive judgmental convenience technique in choosing informant. Purposive judgmental convenience, because the informant was chosen based on her/his position as public relations in a vocational education institution of the best university in Indonesia and geographically easier to access for interviews (in Java island).

The informants are:
1. Supriadianto, S.S., M.A, Public Relations of Sekolah Vokasi Universitas Gajah Mada (UGM is no.1 best university in Indonesia by 2017, Kemenristekdikti version)
2. Mohammad Ridha, S.Sos., M.Si., Public Relations of Program Pendidikan Vokasi UI (UI is no.4 best university in Indonesia by 2017, Kemenristekdikti version)
3. Syauqy Lukman, S.Sos., M.S.M, Public Relations of Fakultas Ilmu Komunikasi, Universitas Padjajaran, Bandung, West Java. He also responsible to manage PR for Diploma 4 FIKOM Unpad. (Unpad is no.14 best university in Indonesia by 2017, Kemenristekdikti version, however the first to have D4/Sarajana Terapan for a Vocational Higher Education in Java)
Every interview is a conversation with questions and answers between the interviewer and the respondent to reach a specific goal (Poerwandari, 1998). Having the constructivism paradigm, and qualitative approach together, the in depth interview used led the interviewer to getting deeper informations about their roles in the program, PR program, and the evaluation of the PR programs. The type of interview taken is a semi structured interview. One of the most common type of interviews, but probably the most easiest one for the researcher to stay on track during the interviews (Daymon & Holloway, 2002).

This study, the answers are analyzed with the grounded theory. The theory approaches to develop and grounding the data in a systematically, gathered, and analyzed order. The common methods used for the grounded theory are participant observation, interviewing, and a collection of artifacts and texts. Next, when the datas are being analyzed, the data are put into 3 types of coding. First is open coding. The first step is where the researcher went to a segment or groupings for information asked. Axial coding. After interviewing the informants, the next step is to group the answers to the categories. This coding brings together all the resembled themes and generally it also introduce new ways of seeing and understanding the phenomenon. Selective coding. Finished grouping and organizing the answers into the categories, the researcher now articulate a matching understanding point (Corbin, 1984).

C. Quantitative Research

The characteristics of the quantitative approach are as follows (Neuman, 2003):
1. Researchers using this approach test the hypothesis as its beginning.
2. The concept is in the form of a clear variable.
3. Measurements are set first before data collection and they are standardized
4. The data is in the form of numbers from the previous measurement.
5. Theories are generally causal and deductive.
6. The analysis is done using statistics, tables or graphs and
7. Explained how it relates to the hypothesis.

The research design used in this research is explanatory or confirmation research that aims to explain the causal relationship between variables through hypothesis testing and implemented by descriptive and verification approach through survey (Rahayu, 2005). The analytical approach is a study to find facts through proper interpretation and can be useful as a problem solution. While the causal research is to study a variable or more that becomes the determinant of other variables (Nazir, 2005).

Data collection methods used in this study is a survey which is one of the research methods commonly used for collecting quantitative data (Bovee, Arens, 1992). Survey is an investigation conducted to obtain the facts of the symptoms that exist and seek factual information about the institution, social, economic, or political of a group or a region (Ruslan, 2004). Questionaires will be distributed to respondents by using google forms.

Population is a generalization area consisting of; Objects or subjects that have a certain quantity and characteristics set by the researcher to be studied, and then drawn a conclusion (Ruslan, 2004). The population of this study is all active students of Vocational Education Program Universitas Indonesia which amounts 3236 students. Once calculated with Yamane formula:
The sample is a small or controlled group that can be controlled and withdrawn from the population. The sample should be able to represent the population under study so that the results of the research conducted on the sample are considered sufficient to represent the population. Methodologically the results of a survey using samples are often more accurate (Eriyanto, 1999). It is used 0.10 the acceptable sampling error. Obtained the number of sample amounted to 97 students. Research location is Vocational Education Program Universitas Indonesia, Campus UI Depok, West Java, Indonesia, 16424, Time of study: September 2017.

The data obtained will be processed using SPSS 1.7 software. The analysis technique used in this research are:

a. Descriptive Analysis (Univariate)
   Descriptive analysis is used to describe the characteristics of respondents and research variables both exogenous variable and endogenous variable. Characteristics of respondents covering age, gender, entrance point, high school origin, parental education, and pocket money per day. While the description of variables include relative education costs, referral groups, marketing communications, private college image, motivation, and student decision making.

b. Path Analysis (Multivariate)
   Path analysis is the development of the regression model. This analysis test the compatibility of the correlation matrix to two or more causal models. Which is compared by researchers. The model is usually depicted in figure circle and arrow, which is the direct arrow indicates cause effect. Regression is done for each variable in the model as dependent variable to other variables so that the model indicates why. The regression weight predicted by the model then compared with the observed correlation matrix.

   These variables and feasibility statistics are calculated. Match of two or more models are selected by the researcher as the best model for theory development. Path model is a diagram of the image that contains about the relationship between independent variables, intermediary variables and dependent variable. A single arrow indicates a causal relationship due to exogenous or intermediary variables with dependent variables.

---

**Simplified formula for proportions**

(Taro Yamane)

\[
n = \frac{N}{1 + N \cdot (e)^2}
\]

n - the sample size  
N - the population size  
e - the acceptable sampling error

Figure 3. Taro Yamane Formula

---

**Table: Standardized Coefficients**

<table>
<thead>
<tr>
<th>Beta (β)</th>
<th>Power of Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>Very Weak</td>
</tr>
<tr>
<td>0.10 - 0.29</td>
<td>Weak</td>
</tr>
<tr>
<td>0.30 - 0.49</td>
<td>Medium</td>
</tr>
<tr>
<td>0.50 - 0.69</td>
<td>Strong</td>
</tr>
<tr>
<td>≥ 0.70</td>
<td>Very Strong</td>
</tr>
</tbody>
</table>

Figure 4. Standardized Coefficients
IV. Result & Discussion

A. Qualitative Research Results

After doing the interview and collecting data from three informants, the results of selective coding on whether the informants do the five-factor model can be seen easily from this table:

<table>
<thead>
<tr>
<th>The Five-Factor Model</th>
<th>Supriadianto, S.S., M.A (SV UGM)</th>
<th>Mohammad Ridha, S.Sos., M.Si. (Vokasi UI)</th>
<th>Syauqy Lukman, S.Sos., M.S.M (D4 Fikom Unpad)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key policy/strategy advisor</td>
<td>-</td>
<td>√</td>
<td>-</td>
</tr>
<tr>
<td>Monitor and evaluator</td>
<td>-</td>
<td>√</td>
<td>-</td>
</tr>
<tr>
<td>Trouble shooter/problem solver</td>
<td>-</td>
<td>√</td>
<td>-</td>
</tr>
<tr>
<td>Issues management expert</td>
<td>-</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Communication technician</td>
<td>-</td>
<td>√</td>
<td>√</td>
</tr>
</tbody>
</table>

From the table above can be interpreted that 4 factors implemented by PR Vokasi UI and 3 factors of SV UGM PR. However, for FIKOM UNPAD, 3 important factors are not implemented (Key policy / strategy advisor, Monitor and evaluator, Trouble shooter / problem solver). This can be concluded clearly from the statement of Mr. Syauqy Lukman from the interview:

“FYI, Public Relations Program in Unpad, is not only for vocational program, because it is still categorized as academic education. What is certain during the PR in Fikom Unpad, I really feel ironic because in the class taught PR to occupy and undergo a strategic role in management, but the reality of Public Relation Fikom Unpad position, still doing less strategic trivial activities PR.”

According to Mr. Syauqy, public relations at FIKOM UNPAD is far from ideal. He knows ideally the work of public relations, but can not carry out in his daily life in accordance with good and correct public relations knowledge due to the provisions of institutions that do not really take the position of public relations as an important strategic position for the institution. As in the following interview quotes with Mr. Syauqy:
“Need seriousness of leadership, even at rectorate level related importance of role of Public Relations in Institution. The role of Public Relations is reduced because at the level of rectorate (university) position / position of Public Relations so removed and combined with the Director of Governance and Public Communication, so at the level of the Faculty was actually the PR is supposed to be the Governance Manager. Incidentally in my Faculty there is the position of Head of Public Relations Lab, then I was given the additional task of being PR on the faculty.”

The results of this study are in line with the results of previous studies by Whittaker-Heck that the study’s findings provided evidence, with caution, that senior public relations officers in higher education environments primarily assume a technician role, with marginal engagement of managerial role enactment, despite holding senior-level job titles. Also, the study reveals that regardless of institution type, a majority of senior public relations officers do not have direct access to the president of their respective higher education institutions.

From other data generated can be seen from the uniqueness of these three informants, the three of them as homework is male. This undermines the stigma that PR is dominated by women. Then, the three of them also work as a lecturer at the university, one of whom is a lecturer for public relations majors (Syauqy Lukman, S.Sos., M.S.M - D4 Fikom Unpad).

Another interesting finding is that the PR program is very diverse. Of the three institutions, it turns out that having the most complete and comprehensive PR program is the PR of Vokasi UI. These programs are:

1. Building image of Vocational Education Program UI through website improvements, profile book, video profile, leaflet, brochure.
2. Organizing socialization programs for vocational and senior high school students through the UI Open Days educational exhibition, receiving high school and vocational school visits, sending promotional kits to schools.
3. Managing the installation of publications in the form of posters, banners, billboards at public lectures and seminars.
5. Socializing vision of Vocational mission through website and posters postings.
6. Accepting customer complaints through the hotline and / or receiving direct complaints at the secretariat.
7. Supporting accreditation activities of study programs.
8. Supports the implementation of the ISO program in Vocational as stated in the certification.
9. Publicize management activities, faculty and students on posters installed in acrylic lifts.
11. Create placards for speakers.
12. Manage the issuance of certificates for speakers.
13. Manage the spread of holiday greeting cards.
14. Manage the celebration of religious big days.
15. Managing entrepreneurial training for faculty and staff.
16. Managing greenmetric filling at the faculty level to be submitted at the University level.
17. Managing Official Social Media of Vokasi UI

PR programs from two other institutions are included in the 17 Vocational UI PR programs.

From these programs, some programs become excellent programs after monitoring and evaluation, giving the best impact for the development of institutions, can be seen in the following table:

<table>
<thead>
<tr>
<th>Supriadianto, S.S., M.A (SV UGM)</th>
<th>Mohammad Ridha, S.Sos., M.Si. (Vokasi UI)</th>
<th>Syauqy Lukman, S.Sos., M.S.M (D4 Fikom Unpad)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socialization via Web, Print Media, and online media</td>
<td>Websites are presented in a nice and accessible</td>
<td>Management of the reception of SMA/ SMK, the high school level visitors</td>
</tr>
</tbody>
</table>

Table 2. Best PR Program of Vocational Higher Education, The PR Version

1174
From the table above, it can be interpreted by SV UGM and Vokasi UI that online PR program is more appropriate to be implemented as a PR program for vocational higher education, arguing that the target audience is a prospective student who spends much of his time in cyberspace. Then interestingly, FIKOM UNPAD stated that offline programs such as Open House and visits as its best program, because the Vocational program is still a cloud on the main target, requires a comprehensive explanation of the program.

It can be analyzed that the PR programs for Vocational Higher Education are decided as the best programs based on the evaluation of the institution. However, what is the opinion of the target audience, in this case the students, about the programs. Which PR programs have the most influence on their interest and motivation to ultimately decide on Vocational education as their higher education. To that end, this research completes the result by conducting qualitative research to the target audience. Vokasi UI students are selected, assuming they are respondents exposed to 17 of the most comprehensive PR programs from Vokasi UI.

### B. Quantitative Research Results

#### 1. Reliability and Validity Analysis

The reliability coefficient is the index that states the relative effect of the error score and the actual score on the respondents' answers obtained. This coefficient describes the actual variance ratio of the score on the answers obtained. This is denoted by the reliability coefficient α. In a reliable α study is > 0.50 (Guildford, 1978).

Validity indicates the extent to which the gauge measures what will be measured. In the value of a measuring instrument, the researcher questioned whether the measuring instrument indeed reflects the variables or concepts to be measured [36]. A questionnaire is said to be valid if it is able to measure what is desired and can reveal the data of the variables studied appropriately. The high degree of instrument validity indicates the extent to which the data collected does not deviate from the description of the validity in question (Arikunto, 1996).

#### Table 3. Reliability and Validity of The Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Alpha Cronbach (Stability)</th>
<th>KMO and Bartlett's Test (Significant)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relativity Educational Cost (V1)</td>
<td>0.520</td>
<td>0.051</td>
</tr>
<tr>
<td>Relational Group (S2)</td>
<td>0.605</td>
<td>0.711</td>
</tr>
<tr>
<td>Marketing Communication (S3)</td>
<td>0.754</td>
<td>0.034</td>
</tr>
<tr>
<td>Image (V2)</td>
<td>0.605</td>
<td>0.657</td>
</tr>
<tr>
<td>Institution (S2)</td>
<td>0.530</td>
<td>0.004</td>
</tr>
<tr>
<td>Academic (A1)</td>
<td>0.785</td>
<td>0.482</td>
</tr>
<tr>
<td>Admission Making (A1)</td>
<td>0.777</td>
<td>0.718</td>
</tr>
</tbody>
</table>

All the variables in this study are reliable and valid, because the alpha cronbach and KMO and Bartlett’s Test numbers are >0.50. So, this model can be continued to multivariate regression analysis.

#### 2. Univariate Analysis

After doing the descriptive frequencies test to all variables, the results are:

#### Table 4. Univariate Descriptive Frequency of The Variables
The greatest good judgment of all variables in this study is the variables Image (Y1), Motivation (Y2), Decision Making (Y4). Specifically, in the Image (Y1) variable, the best image available to the respondents is a graduate of vocational higher education ready to work in related industries. Then, if you look from the Motivation (Y2) variable, it turns out that the biggest motivation of respondents to study in vocational college is because the big name of the Universitas Indonesia as the best university. Regarding the variable Decision Making (Y4), it is proved that this variable has the highest mean values among other variables, the respondents have good relationship and communication with the lecturers in Vocational Education Program Universitas Indonesia.

It should be noted that external factors have low mean values. Relative Educational Cost (X1), Referral Group (X2), Marketing Communication (X3) were not paid much attention by respondents. It is interesting to see that the tuition that can be paid becomes the majority of respondents’ answers regarding Relative Educational Cost (X1) variable. Then, on the Referral Group (X2) variable, the parent is still the person who is listened by the respondents in choosing the college. For the domain of Marketing Communication (X3) variables, roadshow to schools are the one most chosen and noticed by the respondents.

3. Multivariate Analisis

After performing multiple regression analysis of path analysis based on the analysis model, Beta (β) is obtained for each correlation in the model and its significance number. According to Heise (1969) the purpose of path analysis is to obtain a significant model by eliminating the relationships between variables that are not significant. The insignificant relationship is having a level of significance above 0.050. Thus the relationship between these variables must be omitted or removed from the model.

Of all the variables (endogenous and exogenous), it appears that the relation has significance is the correlation between:
1. X1 → Y1
2. X2 → Y2
3. Y1 → Y2
4. Y1 → Y3
From the above correlation, it can be concluded that the largest Beta (β) is the relationship between the "Image (Y1)" variable to "Motivation (Y2)". This proves, that the image of an institution, strong influence on the motivation of respondents to choose college in Vocational Education Program UI. While there is a correlation that has a relationship but does not contribute, namely on the relationship between variables "Referral Group" to "Motivation" with the number Beta - 0.371. This proves that the students listen to the opinions of the Referral Group, but that does not ultimately motivate them to choose college in Vocational Education Program UI.

Here is an analysis model that can be applied to see the factors that ultimately influence the decision of the respondents to choose to enroll in the Vocational Education Program Universitas Indonesia

![Figure 6. Final Analysis Model with Beta and Significance Number](image)

On the external factor, the Easy Course fee is a good financial strategy. Parents, it turns out is the most referral group hearing opinion by prospective students. In connection with marketing communication, “School Roadshow Promotion” is the most popular by students, because in roadshow promotion audience will receive explanation of product/service with more clear and comprehensive.

On internal factors, it is surprising that the image that has been embedded in the students is “Graduates who are ready to work in their respective industries”. This means they understand well, that graduates of vocational higher education are graduates who are ready to work. In terms of motivation, The big name of the Universitas Indonesia as the best university is their greatest motivation to decide to enroll in Vocational Education Program UI.

Their behavior was also very objective by stating they made various alternatives from the information I obtained before I enrolled in the Vocational Education Program UI. It should be underlined that students who have enrolled in Vocational Education Program UI feel they have communicate, get along, and have good relationship with lecturers. This indicates that the lecturers in the Vocational Education Program UI are quite familiar with the students, because the power distance culture is not so lifted in their daily life.

Regarding student decision making to study in Vocational Education Program of Universitas Indonesia, the correlation and significance is only influenced by external factors "Relative Educational Cost" and "Referral Group", then internal factors like "Image", "Attitude", and "Motivation". It should be underlined, it turns out internal factors that have greater power and significant to influence the choice of respondents. Especially, "Image" that affects "Motivation" and "Attitude".

V. Conclusion & Suggestions

The conclusion of this sequential hybrid research is combination between the qualitative and quantitative research.

In the qualitative research on three PR practitioners we found out that the best program to applied on Vocational higher educations are:

1. Online PR Programs such as using Website and Social Media to give understanding, information, and update. However, their target audience has very high consumption of these online channel

2. Open house for any high school students which interested in knowing the Vocational Higher Education better and comprehensively.

From the quantitative research, we found out that
1. Image of educational institutions is apparently the most important thing that affects the choice of prospective students in choosing a college. So for vocational education institutions, a good image must be built.

2. On the field of Marketing Communication and Marketing Public Relations Higher Education Program Vocational UI must improve the program "School Roadshow Promotion", because it proved to be the most effective to provide more understanding to prospective students. This kind of activity is giving understanding as good as open house. In roadshow activities, the image that want to be built can also be delivered well by public relations and marketing practitioners to the audience.

Vocational Education Program Universitas Indonesia (VOKASI UI) is helped by the big name of Universitas Indonesia, but it would be nice, if Vocational Higher Education Program all over Indonesia begin to improve and maintain the desired image. It has been found that the VOKASI UI can be raised, that students and prospective students have enough understanding, that vocational higher education will produce graduates who are ready to work to enter the industrial world.

Vocational colleges throughout Indonesia, should understand, that vocational higher education requires more attention in terms of image in the community. These negative stigma should be removed from the minds of the people, through a comprehensive understanding of what is actually meant by vocational education. This requires the support of many parties as bearers and agents of change, ranging from students, educational staff, lecturers and leaders to at all times spread positive image of vocational education to audiences through various communication channels.

Here are practical suggestions from this research for the world of public relations, especially public relations in the world of higher education vocational. According to the research, there are three things that can be applied by public relations at vocational college:

1. Conducting image formation and dissemination of information about how vocational education is actually through online media. The researcher's suggestion is to use positive campaigns to target audience through good post, positive, and close to the target world. Parties who do the campaign, are not paid ambassador (endorser), official post is not enough, who must do the campaign is the real vocational practitioners. Trustworthy can be generated from credible and trusted representatives. As an obvious example, the civitas academica in the communication study program Vokasi UI is committed to disseminating information, achievements, and positive activities that occur on the Vocational campus in their social media. So their network which also consists of Vocational target audience can see the information and a good image of vocational education. Proven, communication study program is the most interested study program in Vocational Education Program UI. Many of the audience (parents and prospective students) are ultimately better understanding of what is meant by higher education Vocational and decided to choose to study in Vocational.

So the program proposal is to create a planned campaign program, which appeals and requires all civitas academica at a Vocational college, to help spread the positive information on their network in social media. If not create your own content, at least repost, share, like, love the things posted by the official account. The message can become viral and hope will provide a good branding image for higher education vocational.

2. Vocational Education has a problem of its understanding among the audience, there are many who think that diploma education (vocational) is a three-years undergraduate academic education. Though the definition is very far from the view. Vocational higher education is a higher education that teaches 75% practice and 25% theory, vice versa with undergraduate academic education. So with Vocational education the graduates produced are graduates who ready to work and will be well received by the industry. The results of this research prove the majority of Vocational UI students are aware of this and can catch the definition well. They also stated that the understanding they get is from the visiting roadhow of the university to SMA/SMK, or voluntary promotion by their alumni who have enrolled in Vocational UI. It would be better if there is a planned program to do this, the researcher proposes three forms: 1) Held a road show to SMA/SMK program in Indonesia and provided an explanation of the general Vocational, existing majors, learning environment and work prospects. PR can bring students and alumni to give testimonials, 2) Hold open house program
specifically for Vocational Higher Education and open for visits from SMA/SMK all over Indonesia. Invitation can be disseminated to SMA/SMK along with brochures/posters/other print promotional materials, 3) PR can cooperate with Study Program through community service to SMA/SMK, or Student Association and Paguyuban Mahasiswa Daerah by providing them promotional materials that can they deliver to their juniors in SMA/SMK.

3. The researcher's final strategy is not derived from this research. However, it comes from previous research conducted on 100 Vocational UI students entitled "The Effect of Consumer Behavior and Word of Mouth on Selection of Department and University" by Pijar Suciati and Amelita Lusia. The research found that PR was related to the use of mass media and there was a traditional mass media that turned out to have a considerable influence on the decision to choose a department at the University. The media is "Radio", more precisely "Radio Talkshow" program.

Of all the marketing stimuli that have been done by the university, it turns out, the greatest influence of prospective students in deciding the election of majors is the influence of social media. It is caused by the culture of the young generation in this period, who love to interact in social media. However, there is an interesting result from the stimulus of marketing, the second rank that affects prospective students in choosing majors and universities is because of "radio talkshow".

This proves, there are certain times where they listen to the radio intensely and this has a big effect. The researchers' temporary assumption, they listened to the radio in the car at the time of going to school and go home from school, required further research for this conclusion (Suciati & Lusia, 2016).

Practical suggestions for PR education programs in this regard is vocational higher education, PR can compose a talk show at a radio station that has a listener segmentation is a prospective student, such as; Prambors, Gen FM, Trax FM, etc. The talk show brings together successful alumni who close to youngster world. For example, a talk show on Vocational education that presents Angga Dwimas Sasongko, a famous Indonesian director who directed many famous Indonesian Movie, such ac Filosofi Kopi and Surat dari Praha". Angga is a Vocational graduate of Broadcasting UI class 2003. The talkshow can be conducted at the prime time, hours when the youngsters are listening to the Radio.

Another practical suggestion is to make a talk show about Vocational UI on the radio whose listeners are the parents of the prospective students and other important stake holders (government and industries). PR can work with Brava Radio, Sonora, Elshinta, etc. The talk show may present the director of the vocational school and Chairman of the "Vocational Higher Education Forum of Indonesia - FPTVI" to speak on what vocational higher education is.

For a major change of public awareness of the importance and image of an applied education (vocational), support is urgently needed from all parties, from the government, through regulation, and from the industry in terms of entry requirements and cooperation in internships and the provision of human resources. Hopefully, this research and its practical advices can be given to the more advanced world and the development of the world of Public Relations, especially Public Relations for Higher Education Vocational in Indonesia.

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The Implementation of Public Organization Communication and Its Long Term Effect on Corporate Image: A Literature Review of PT Astra Honda Motor

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ABSTRACT

PT Astra Honda Motor (AHM) is the top motorcycle production company in Indonesia with total share market above 70% nationally with distribution volume 6 million unit each year. This growth create new problems in the society such as increasing number of road accident, many motorcycle users disobey traffic laws, and the increase of underage motorcycle users. This condition is interesting to observe as how PT AHM do their public organization communication to overcome the rising issues in society. To strengthen this review, 2 organization communication theory is used, public organization communication and organization development and change. These 2 theories become the basis to see how PT AHM internally manage their communication to create impactful message to their customer and public audience. Based on review to the company, it is found that PT AHM is active and consistent in running their public organization communication. One of their campaign that has been running is One Heart or more known as Satu Hati campaign. All the campaigns and communications done help PT AHM to avoid accusations of the cause of negative effects of high motorcycle production. And until now, they remain the market leader in national motorcycle market share.

Keywords: Communications; Impactful Message; Public Organization Communication; One Heart; Organization Development

INTRODUCTION

PT Astra Honda Motor (AHM) is a motorcycle production company and also the sole brand right holder of Honda Motorcycle in Indonesia. Astra Honda Motor is a company with 50:50 stock share between Astra International and Honda Motor Co. Astra International and Honda Motor relationship that has been going on for a long time has made Honda motorcycle as one of the most favorite motorcycle brand in Indonesia. Astra Honda Motor is the market share leader in Indonesia with total national market share in 2017 reaching 72% (based on AISI data March 2017).

Astra Honda Motor success in dominating national motorcycle market share is boosted by their strong Brand Image between Indonesian people. I believe that AHM dominance in Indonesia is a result of strong and thorough public organization communication that AHM do to their public. Public organization communication has a very important role for AHM in managing their customer’s trust, and avoiding negative stigma from audience to particular motorcycle brand.

Building and maintaining corporate image in automotive industry, especially motorcycle industry, has its own challenges for the company. There is still a very strong stigma for motorcycle as the main
cause of heavy traffic jam in Indonesia. Low motorcycle price with easy credit payment scheme boost motorcycle sales and keep growing. In Fact, according to metrotvnews.com article on 18th May 2017, with title “Distribusi Motor Januari-April 2017 Nyaris Sentuh 2 Juta Unit” the number of total motorcycle distribution in 4 first months of 2017 has reached 2 million unit. This number is not surprising, because according to Astra International 2016 annual report press release, AHM motorcycle production reach 5.9 unit in 2016.

This huge number had its own consequences for AHM and motorcycle image. News in media often show news related to motorcycle user careless behavior on the street, like riding in the opposite direction, riding without helmet, and reckless riding that causes death to the rider. There are also news of many underage rider that still yet to own their driving license. People also mostly discuss about motorcycle touring convoy that disturbs public safety and public ordinance.

These issues can turn out to be a big issue if AHM look away from the reality that is happening in the society. Without proper public organization communication, there could be a new rising stigma that AHM did not care about the environment and only prioritizing their benefit from motorcycle sales. Should that assumption rises, customer and the public audience will start to leave Honda motorcycle and could certainly convert to other motorcycle brand that gives more attention in the issues caused by motorcycle growth.

However, seeing how AHM still have strong domination in national motorcycle market, I make an early hypothesis that AHM should have a strong public organization communication, so they can maintain their good image in public’s perception. Their public organization communication also proven successful with their positive sales number each year. This journal is written based on these backgrounds to give better understanding on how AHM public organization communication campaigns help the company in increasing their good image and maintain strong perceptive from public audience.

**FINDINGS AND DISCUSSION**

**Public Organization Communication**

One of the main literature that I reviewed in relation with this paper is public organization communication. Public organization communication implies of communication form which is done by corporate/organization to either internal or public audience. This communication can be channeled through face to face meeting, like Press Conference, Media Q&A, or Town Hall session with corporate audience. Besides face to face meeting, another communication channel can be used via media such as videotape, tv, radio, etc.

Zelko and Dance in the book “Organizational Communication” written by Gerald M. Goldhaber (1993, page:284) states that internal communication is used as a mean to increase operation efficiency within organization. Latter this means will be developed between management and corporate human resources, including corporate orientation, safety, work compensation and benefit, education and improvement, moral improvement, and employee satisfaction. Meanwhile, external communication include of corporate blueprint communication, issue and public opinion communication, and commercial communication. Both these internal and external aspects are divided to each responsible department or divisions within the organization. Zelko and Dance’s opinion show that there are differences between public organization communication to internal with public organization communication to external, however, some other professional such as Seitel in Goldhaber (1993, page:284) state that public organization communication is a public relations role, which is collecting internal and external understanding, and also receiving corporate blueprint communication.

Seitel’s statement shows that in public organization communication, one organization must first understand their internal needs before they can do proper external public organization communication. It prove that organization must have the capability to detect and capture their internal organization needs before they create the right external communication message. This is important because, one organization consists of departments and divisions that correlates to each other. If a public organization communication message is done without considering all internal aspects, the delivered messages to external public may be less optimal.
In doing public organization communication, the organization must also consider some contingency factor that could become a basis for them to do proper public organization communication. These factors are:

- Economy
- Technology
- Legal
- Social-Political-Cultural
- Health and environment
- Internal Activity

These factors must always be considered by organization to make sure that their public organization communication could cover all of the mentioned external factors. Should these factors are not properly attended, then one organization existence may be in danger in the midst of tight economy competition.

Zelko and Dance in Goldhaber (1993, page:295) state that public organization communication can give advantages to both organization internal and external audience. Internally, public organization communication could affect organization efficiency and operations, while externally, public organization communication can increase organization positive image. Public organization communication must be done frequently to create a better long lasting effect. At first, the organization may only be communicating to small groups of audience, but with better planning and consistent execution, those small group will reach thousands and even millions of people.

Zelko and Dance in Goldhaber (1993, page:295) expose the importance of how one organization build their image and in what position they put their organization in the public’s perceptive. It also mention that in the midst of many industry growth, one organization may face difficulty to stand out. Therefore, the right strategic planning by organization is the main key success factor for organization to obtain strong positive image and achieve maximum sales result.

The form of public organization communication also varies depending on who to communicate with. Internal public organization communication can be done with meeting between department heads, meeting with labor union, employee training, etc. Meanwhile, external public organization communication can be done in Press Conference, lobbying to government, commercial advertisement, broadcasted interview ect. The many forms of doing public organization communication indicates that one organization must have strong planning in public organization communication, so that their message to public can be conveyed well by the public audience. Another key elements in effective public organization communication is organization positioning within the public and also the frequency of doing public organization communication.

**Organization Communication and Change Audit Planning**

Next Literature to review is still within Gerald M. Goldhaber book regarding Organization Communication and Change Audit Planning. One of the discussed subject in this part is about organization development. Organization development is a method that are used to change an organization, whether culturally, value, or structure, so that the organization can adapt to changes and external dynamics for the years to come.

Gordon Lippit in Goldhaber (1993, page:322) states that the definition of organizational development is to use knowledge and technique from behavioral science, organizational development attempt to combine all individual needs to grow and improve within target and organization objective to create a more effective organization. Lippit statement reveal that an organization cannot stay idle to changes and must prepare as best as possible so that the organization, both externally and internally, manage to adapt to all possible changes.

Warren Bennis in Goldhaber (1993, page:323) states that organizational development is needed by organization for the present and the future to face major changes in behavior managerial effectively. The mentioned changes are:

- New concept about human based on their improved knowledge, that replace simpler man
• New concept of power based on collaboration and reason, that replace concept of power based on extortion and threats
• New concept of organization based on humanitarian-democracy approach, that replace mechanic bureaucracy system.

On creating and planning, organization usually used a consultant services that are ready to help develop new values within the organization, though there are some company that manage internal consultant for changes. Even so, before starting doing development, an organization must have a full pledge plan and they cannot start changes spontaneously. First, an organization must be able to analyze first what are the main issues, both internally and externally, that should become first priority to complete. Organization must also think who will initiate and lead the development process. Beside that, organization need to have clear mapping of their top performing employee and see their way of work, so they can become the benchmark for other employees.

Communication consultant are divided to 3 main models. The first model is the purchase model, this model illustrate a condition of which the organization inquire their needs to consultant after diagnosing a trouble in the organization body. After finding the core issues, organization meet with the consultant to buy needed solution based on their trouble. After the consultant give over the solution, the organization will end the project. Basically, in this model, all existing troubles are analyzed by the organization themselves, and the consultant only give the solution. Schein in Goldhaber (1993, page:326) state that the success of this model is very depending on how accurate is the client (organization, department, manager) in diagnosing their own needs and communicating it to the consultant, also figuring out the consequences of the intervention and recommendation given by the consultant.

The second model in communication consultancy is the Doctor-Patient Model. In this model, the client approach the communication consultant without knowing for sure of what is the organization problems. In this model, consultant have a massive role in finding out clearly of the main issues in the organization. Chaplan in Goldhaber (1993, Pagel:326) states that the consultant main objective in this model is to fix and improve the way their clients communicate, therefore, consultant have a basic role to make assessment on their clients condition so they can find solutions or new communication method that can be used by their clients. This model demands that consultant do full communication audit in the organization, but, this model also have a risk for failure if the consultant cannot figure out the problems in the organization, and they themselves will not clearly describe the organization problems.

The third model is Process Model, this model explains that in organization problem solving, both the organization and the consultant work together starting from the initial process until the problems are solved. In this model, both side equally diagnose the organization condition and do intervention, both side could also end their working relations if the problems are already solved. This model assumed that clients don’t know about the existing problems, and don’t understand the available help that exist, but they realize that it is better to solve their problem themselves. Consultant is assumed willing to collaborate with their client, give alternate solutions, and is an expert in problem diagnose. This model is more on the consultant role to guide their client in handling problems, so that in the future, clients will have sufficient knowledge in solving their own problems without using consultant services.

After a contract between the clients and the consultant are made, then start the problem diagnosis phase. Weisberd in Goldhaber (1993,page:334) reveals that there are 6 main category to diagnose by the consultant. These 6 cateogries are purposes, structure, leadership, relationships, helpful mechanisms, rewards. After all these 6 categories are diagnosed, then the consultant can start creating first steps of necessary solutions to take.

During this diagnosis steps, intervention process can already be started by the consultant. As stated by Turner in Goldhaber (1993, page:335) 8 fundamental objectives of consultant is to:

• Give information to clients
• Solve client’s problems
• Create diagnosis that may have to make organization redefine the problems they face
• Creating recommendation based on diagnosis result
• Helo do implementation on the given recommendation
- Build a consensus and commitment for improvement action
- Facilitating learning curve for client, how to manage their own problems in the future
- Permanently increasing organization effectiveness

**Research Method**

This review is mainly based on qualitative approach. The review is based on selected communication campaigns that Astra Honda Motor has done to the public. The main review will be into AHM newly launched communication campaign such as their newest safety riding campaign #Cari_Aman and also their current long running communication campaign One Heart, or as most people understand “Satu Hati”. The review than will correlated to a case analysis, regarding their connection to AHM internal process of preparing their communication campaigns. This review will see how AHM manage their communication campaign and their steps in reaching maximum communication campaign result. The review will also include AHM public organization communication that has established as yearly event and already well known by public audiences.

The review then will be connected to literature review on the previous sub chapter, to become basic assumptions and prove if AHM public organization communication able to change customer and public perception to issues that are caused by motorcycle industry, or it is proven ineffective so that AHM public organization communication did not reach optimal results.

**PT Astra Honda Motor Internal Public Organization Communication Analysis**

PT Astra Honda Motor is the top market leader in national motorcycle market with market share reaching 72%. AHM also have high production yearly volume, reaching up to 6 million unit of motorcycle each year. AHM big production volume capability comes from their various manufacturing factories that they own. In total, AHM own 5 manufacturing factory located in Jakarta (Sunter and Pegangsaan), Cikarang, and 2 newest factories in Karawang. These 5 factories is also completed with Parts Centre as AHM spare part production center and Production Quality Engineering site to test motorcycle engine and capability.

AHM have twenty five thousand employee in total to support the operations of all their factories and achieving high production volume target. These twenty five thousand employees are a mix between factory workers and office workers. The huge amount of organization employees makes AHM have a diverse and large organization structure, and this affect the communication network and method in the company. AHM divide their organization to 4 different directorate. The first directorate is “Production Engineering and Procurement Directorate”, this directorate is mainly responsible for the motorcycle production, starting from the factory standard operation procedure, production new technology, to spare part and supply procurement to supplier. Next there is “Finance Directorate”, that manage all finance and accounting business within the company, including expenses policies and budget diversification. Third is “HR,GA,IT Directorate” that manage all human resources problems, office and factories general needs, and information technology support. The last directorate which will be my main focus is the “Marketing Directorate” that as it called, responsible in ensuring optimal sales, marketing, and service effort, to gain maximum sales and satisfaction achievement.

In the figures, we can see that Marketing directorate are split again to 7 division such as: Marketing Planning and Analysis Division, Sales Division, Logistic and Distribution Division, Technical Service Division, Part Division, Honda Customer Care Center Division, and Oversea Business Division. All those divisions are supported by corporate function that include in it is the organization public relations and communication officers. Each of the divisions above are split again to several departments, of which each department have a role in establishing public organization communication to public. One of the division that is vital in developing public organization communication is Marketing Planning Analysis Division. This Division itself consist of 8 different departments.

The first department is Product Management Department, this department manage all Honda motorcycle product lineup preparation. Collaborating with Honda Japan, and other Honda affiliations, this department is responsible in managing the flow of Honda new lineups, when to launch the new
product, what are the colors, what are their apparel and accessories, when will it be distributed, etc. This department usually become the project leader of upcoming new Honda Motorcycle product. The second department is Consumer Insight Department, this department main task is to do survey toward Honda customer and competitor customer. The survey done varies on regarding the new product, survey on AHM campaign, customer satisfaction, also surveying Honda competitor’s customer. The next department is Safety Riding and Motorsport department, this department heavily focus on motorsport activities, and also creating campaigns regarding safety riding to all Honda network and customer. The fourth department is Network Physical Department, this department manage standardization of Honda network throughout Indonesia, how the Dealer network look and design that must follow AHM standards.

The fifth department is Advertising Department, this department mainly in charge of preparing all promotion material and advertising campaign for Honda motorcycle products and campaigns. Sixth is Digital Advertising Department, this department have the same role as advertising department but their main domain is in digital network. The seventh department is Brand Activation Department, this department is responsible for increasing brand and product image awareness through event and other offline activities, also support all corporate events preparation. The eight department is Community Development Department, this department is responsible in managing all Honda community clubs and creating various activities to support the communities existence and growth.

All those mentioned departments have vital parts in developing Astra Honda Motor public organization communication to their vast audience. But, before AHM do their public organization communication to public they must first get their perception align internally. As mentioned in Goldhaber (1993), one organization must know what their internal audience want first before executing public organization communication to external. In Astra Honda Motor, before facing new production year, all organization management members join together in Planning Cycle phase. This planning cycle is separated to different levels, from level 1 planning to level 4 planning, of which will become the final blueprint program for the coming years. The planning phase start from department levels, and after that, each department will join together for Division level planning. After several revision and planning, the approved division level planning will be brought to directorate level. Here, all divisions under marketing directorate will present their division plan to the Directors. After all is final, all directors join in shareholder meeting to finalize the yearly plan for all corporate body.

AHM internal coordination is not only through planning cycle. To help monitor planned program, each month, AHM internal have PDCA (Plan, Do, Check, Action) meeting that is separated to several level same as the planning cycle. This PDCA started from department level and will be continued to directorate level. During this PDCA process, all management member starting from department level will join together to discuss monthly activities that are currently running. With this PDCA meeting, all department and division related in the organization will always know other departments working program and they can coordinate to collaborate all related program work so that it will stay inline. With this process, one point mentioned in Goldhaber (1993) is proven, because Astra Honda Motor fully aware of the importance of internal coordination to align their perception in creating work program.

Frequent coordination within the organization internal body is one indicator that public organization communication to internal audience by Astra Honda Motor has become their key success in generating impactful public organization communication to their external public. Large human resource number inside the organization does not stop Astra Honda Motor in generating well coordinated internal communication system. The next sub chapter will focus on how AHM manage their public organization communication to their external audience.

**Astra Honda Motor External Public Organization Communication**

As previously explained in the introduction, currently, Astra Honda Motor problem is no longer about dominating the national motorcycle market share, but more on to how AHM will change negative public perception toward the growth of motorcycle volume in the streets and the negative effect caused by it. As explained in public organization communication literature review, one of the factor that can push organization to do external public organization is factory environment factor.
Astra Honda Motor actively commence public organization communication campaign both for commercial and for social purposes. In this case, I will highlight Astra Honda Motor public organization communication that fulfill the social purposes. One of the more famous Astra Honda Motor campaign is “One Heart” campaign. Also well known as “Satu Hati”. This campaign is launched in 2010. One Heart is a value that the organization try to develop as a manifestation that Astra Honda Motor always consider customer needs to produce a motorcycle that resembles their customer’s dream. At the beginning of the campaign, One Heart is introduced as TV Commercial to the public. AHM create special themed jingle and video ad, and they utilize their current brand ambassador Agnes Monica and Nidji.

Astra Honda Motor start to show their commitment to this value by sharing and spreading this campaign to all their network and to their customer. Internally, AHM implement One Heart campaign as the main organization value. Within One Heart they create 4 main working values such as Respecting Others, Responsible, Integrity, and Innovation. These value is placed in every supporting element in organization, and implemented by placing the value card in all employee ID card, and through all internal communication network. AHM also oblige their Main Dealer, Dealer, and Service Station to follow basic protocols of mentioning “Salam Satu Hati” every time they welcome their guest in dealers, when they answer telephone calls, even when they answer e-mail. This cause help customer to be more aware of the campaign and have better understanding toward this campaign.

Externally, Astra Honda Motor always put their One Heart brand in all their promotion material. All promotion material such as TVC, Banner, Billboard, product ad, flyer, etc. have to include One Heart logo beside their well known wing mark. One Heart jingle also become a must to play in every AHM and their Main Dealers activation event. Beside that, Astra Honda Motor also support Honda Moto GP racing team by placing One Heart and Satu Hati brand on the racers racing suit. This logo placement on Honda Moto GP racing suit caught public attention and makes them more aware of the campaign. AHM also actively invite Marc Marquez and Dani Pedrosa to Indonesia to do meet and greet with their fans, and alongside it try to show how Honda One Heart help them achieve their success.

AHM strong effort in communication One Heart and Satu Hati, related to public organization communication theory by Goldhaber (1993) can be seen as the organization effort in creating different positioning then any other motorcycle manufacturer in Indonesia. One Heart and Satu Hati started as a promotional communication campaign, but has established to become better known as Honda Brand value. Astra Honda Motor manage to position themselves as a motorcycle manufacturer that help customer in achieving their dream with One Heart Value. A value that shows that Astra Honda Motor listen to their customer demand and implement their demand with a reliable product and top notch customer care services.

Honda motor competitor in Indonesia such as Yamaha, also have a main slogan for their product “Semakin di Depan” this slogan however have very clear differences with Honda One Heart value. Yamaha’s “Semakin di Depan” focuses on their product. Yamaha want to show that their product is more advanced and have better performance than their other competitors, meanwhile, One Heart slogan have a more flexible meaning and can be correlated to all Astra Honda Motor activities. Astra Honda Motor consistently use One Heart on all their public organization communication and it is not limited to their product but also their services.

Astra Honda Motor further boost One Heart value by becoming main title sponsor for high school national basketball competition DBL. By becoming main title sponsor, AHM have the right to use their brand name on the event title, and so for the past ten years, the event is more known as Honda DBL. This collaboration help Honda to promote their One Heart value to Honda DBL audience, who mostly are entry level customer in motorcycle. AHM create strong One Heart branding throughout the venue and manage to influence students in more acknowledging One Heart value.

Astra Honda Motor One Heart campaign is a public organization communication method that AHM do to divert customer attention to negative issues regarding motorcycle industry. However this campaign is not the only arsenal in AHM sleeve. One Heart campaign now has become an umbrella for all other AHM public organization communication. Their goals to help achieve customer dream is supported by another public organization communication campaign to strengthen One Heart value and increase positive public perception toward Astra Honda Motor.
Recently, on 29th March 2017, AHM has launched another public organization communication campaign meant for social purposes. This campaign is related to safety riding issues that remains one of the hottest issues in motorcycle. This campaign is called #Cari_Aman, interestingly, AHM launched this campaign together with new product launching All New Honda Scoopy. AHM want to use the momentum of new product launching so that their new safety riding campaign also got maximum attention from media that cover the event.

To put it simply, #Cari_Aman campaign focus is to change motorcycle rider habit on the street. The first phase of this campaign is reminding motorcycle rider to use riding jacket and click their helmet properly before taking a ride. Safety riding itself is not a new concern for AHM, even before this campaign is launched, AHM and their Main Dealers already have 5 safety riding center, a place open for public to learn how to ride motorcycle safely and in a proper manner. These safety riding center is active in giving safety riding education to students and already have estimate 1900 safety riding education activities (based on AHM internal data).

However, according to AHM internal survey, safety riding awareness keep decreasing from previous years. In 2014, safety riding awareness number reach 49%, while in 2015 it decreases to 41%. This decrease in safety riding awareness push Astra Honda Motor to create new safety riding communication campaign through #Cari_Aman. To create the right message, Astra Honda Motor do organizational communication change. Goldhaber in Organizational Communication (1993, ch:9) state that an organization will use the help of consultant service to achive maximum communication change. In developing #Cari_Aman campaign, Astra Honda Motor use advertising agency service to help create #Cari_Aman content. However, in creating this campaign, agency role is not merely creating good communication campaign content but also create the right communication message to be released during press conference session on its launching day. AHM collaboration system with their agency is using Process Model collaboration, which according to Goldhaber (1993) is a form of collaboration where both organization and consultant do intervention to each other until they reach a clear agreement on improvement point. The results from both side intervention create several decision that reflects the organization needs.

#Cari_Aman campaign is more positioned to active and dynamic youngster. The terms “Cari Aman” itself is commonly used term by Indonesian youth to refer as finding safety in facing problems that may happen to them. The term looking for safety is the reason the word Cari Aman is chosen. The use of hashtag(#) in front of the word Cari Aman also indicates that this campaign is aimed to youth active in social media. It may be too soon to evaluate how far have this campaign achieved in changing rider habit to be more safe in riding their motorcycle, however, through this campaign, AHM has made different positioning from their competitor, and their campaign coul become the pioneer and icon in safety riding.

If Astra Honda Motor manage to run this campaign consistently, then it is very possible for this campaign to reach the same success One Heart campaign had achieved. Currently, one of the positive perception from Honda customer is that their product is the most fuel efficient. In creating more campaign related to safety riding, another positive perception can be created. By using One Heart campaign, they want to show that they fully support their customer in achieving their dream, meanwhile, #Cari_Aman campaign is created to show that AHM is also concerned about safety riding in Indonesia, and hopefully can help create better understanding of how important it is to stay safe on the road.

Discussions
Astra Honda Motor case review have shown that AHM have more advanced and different public organization communication compared to their competitor in the same industry. Unique approach in their campaign have made AHM public organization communication campaign one step ahead of their competitors. AHM communication campaign message that focuses on issues other than product selling have given them more added value in the customer perceptive. One Heart and #Cari_Aman campaign that focuses more to customer value can be used as a new persuasive tools to their customer, and show that AHM give total attention to give better service to their customer and give stronger attention to motorcycle riding safety issues.
This assumption is related to journal research by Krishna S. Dhir (2006) from Berry School of Business with title “Corporate Communication through nonviolent rhetoric. Enviromental, Agency and methodological prerequisites”. In this journal, Dhir states that stakeholder can be persuaded with more persuasive, attractive, and entertaining approach. This is also relevant to The Nonviolent Rhetoric theory that implies if communication to stakeholder must be able to increase awareness, educate, train, and also contribute to stakeholder prosperity.

The review from that theory in Krishna S. Dhir (2006) journal align with AHM #Cari_Aman communication campaign. Through #Cari_Aman, AHM want their stakeholder to have new and more fun perceptive regarding the importance of safety riding. One Heart campaign that has been running for the past 7 years also give a lot of additional values toward the public perception values to Honda motorcycle.

AHM successful public organization communication can be achieved through strong and well structured internal communication within the organization. Yearly planning followed by monthly review through various level help the internal communication flow to get better. AHM internal communication that demand all employee to stay connected to each other, help AHM avoid communication disturbance within the organization. In Journal written by Hassan Abu Bakar and Che Su Mustaffa (2012) titled “Organizational communication in Malaysia organizations, Incorporating cultural values in communication scale” reveals that good organization communication construction can help increase work satisfaction. This satisfaction is supported by many factors such as good communication flow, communication climate, message characteristic, communication structure, group bond, and respect toward each other. Strong communication in AHM internal can be a plus factor for the organization in managing optimal external public organization communication campaign.

**Figures and Tables**

![AHM Organization Structure](image)

**CONCLUSION**

PT Astra Honda Motor as the national leading market leader already have good public organization communication that not only focusing on increasing sales but also touching emotional side of their customers. AHM strategy in creating social purpose public organization communication can be seen as away to create more positive public perception toward motorcycle industry and forget about the negative stigma to motorcycle riders. Their campaign shows, that eventhough AHM have big production volume, they still have responsibility in creating safer riding environment for the public. The campaign itself is pretty simple, but with more intensive communication, AHM can become the pioneer in introducing safety riding to audience, and they may be regarded as the first motorcycle manufacturer to help create better riding environment to the people.

Honda has done a lot of public organization communication campaign, and it may be better if the organization can stay focus on the main purposes of their communication campaign. The use of One Heart as the communication campaign umbrella completed with other communication campaign makes Honda have a vast communication network. Astra Honda Motor able to pay attention to their stakeholder and already covers many area. So the remaining thing they must consider is how to remain focus and
consistent with their communication campaign so that customer and audience remain to have good trust toward Astra Honda Motor and all their network.

REFERENCES


Abstract

The Pasig River is an integral part of Philippine history because it once served as the center of trade and commerce in the Spanish Manila. The grandeur of this river has fallen into decay because of human activities and pollution as a result of dumping of wastes directly to the river. This study examines the result of the government-led 15-year rehabilitation program of the Pasig river from 1999-2014 in terms of improvement of its water quality. The methodology used in this research was descriptive qualitative approach. Historical data on the Pasig River and narrative reports on the rehabilitation of Pasig River Rehabilitation Programs were culled from books, online sources, and annual accomplishment reports of the Pasig River Rehabilitation Commission. Interview was also conducted with key informants from the Pasig River Commission to gather additional information and to substantiate the data collected from the reports of the PRRC and other organizations who took part in the rehabilitation of the river. The findings revealed that the program to rehabilitate the Pasig river succeeded in terms of reducing the pollution of the river through its clean-up operations such as dredging, desilting, putting of waste trap and employing river warriors to do the cleaning of canals to restore the water quality of the river into level C. One of the most arduous tasks that the PRRC and its partner agencies have to face to date is the removal of informal settler families (ISF) along the waterways in order to develop linear parks built along the tributaries of the Pasig river into leisure areas. With all these efforts to restore the river, PRRC bagged the first runner up prize in the 20th Thiess International Riverprize, which recognizes organizations in countries with best river restoration and management programs, held in Brisbane, Australia.

Keywords: Pasig River, estero, Pasig River Rehabilitation Commission (PRRC), riverbanks development, Asian Development Bank (ADB), ABS CBN Foundation

Introduction

The story of the Pasig river is the story of every Filipino. Rivers are not mere bodies of water; they have an important role in nation-building. The first street of Manila was the 27-km Pasig River, if by street is meant a passage or thorough way (Medina & Ira,
Historians wrote that ancient Filipinos traveled by boat and not on wheels. As early as 16th century, early Filipino settlements were found along the River whose leaders were Rajah Matanda and his nephew Raha Sulayman. Foreigner travel, Paul Gironiere, wrote in the 1880s, that there were many elegant and big houses built along the Pasig river. The Malacañang, the official residence of the president of the Philippines, was built along the bank of the river (Alejandro & Yuson, 2000).

Along the Pasig River were situated various wharves where the boats destined for Laguna de Bai or for periodic trips to the provinces of Cavite, Bulacan, Pampanga and Batangas docked for embarkation. The river played a significant role for trade and commerce. Ships of all kinds from different parts of world entered the Pasig River and docked alongside the Aduana located on the south side of the Pasig to unload good that will be brought the commercial houses in Anloague via the estero de Binondo. Hence, the strategic location of the river encouraged many businesses to established factories on the river such as the Fabrica de Fontin, the ‘first factory in the Philippines’ built in 1869. In the first quarter of the 20th century, oil companies began constructing oil facilities on the banks of the river (Alejandro & Yuson, 2000).

The American occupation of the Philippines witnessed the putting up of power-generating plants, industrial plants on the sides of the river. More factories were established near the river over the years. A 1977 survey showed that out of three hundred firms engaged in the manufacture of food products, pharmaceuticals, textiles and steel found on both the north and south banks, 134 were found to be dumping their liquid wastes into the river. The discharge ranged from suspended solids and chemical poisons to oil and grease (Alejandro & Yuson, 2000).

The river started to decline in the 1930s and in the 1950s, bathing and washing were prohibited. The Pasig River started to “smell” and transport by ferry declined in 1960. By 1970, “the river falls below class C levels of pollution.” In 1975, the river falls below class C II levels of pollution. In 1980, the river tourism declines. 5 years later, “all types of fishing had come to an end.” The Pasig River was declared biologically dead by the Department of Environment and Natural Resources in 1990 (PRRC Environmental Management Committee, 2014). According to the study made by JICA in 1997, the Pasig River has decayed because it became the dumpsite for household and industrial waste at the rate of 1, 300 tons per day. Solid waste and sewerage (both domestic and industrial), illegally dumped into the river at the rate of 1, 300 tons per day (JICA, 1997, as cited in PRRC Report, 2014), included chemical compound, medical wastes, asbestos, acids, paints, oil, lubricants, heavy metals and other volatile organic compounds. Industrial pollution can be detrimental to the health of the people living in urban areas in underdeveloped countries. The rivers which used to be a grandiose cultural backdrop in the past has fallen into decay due to human activities like urbanization and commercialization.

River rehabilitation and restorations are sometimes used interchangeably but both programs aim to provide solution to save the polluted bodies of through scientific technological approaches (Hillman & Brierley, 2005). In Asia, Singapore set up for a 10-year plan to rehabilitate the Singapore River and the Kallang basin from 1977-1987. The Cheonggyecheon river in the city center of Seoul, South Korea was rehabilitated in the mid-2000s and became the model of rehabilitation projects in countries in Asia (Cho, 2010). River rehabilitation in Malaysia was government-led initiatives, but improvement
labors such as parks along the Klang River have been challenged because there were no efforts to lessen the pollution content and improve the water quality (Bradley 2010; Weng, 2005). In India, one of the biggest restoration projects was the Yamuna Action Plan (YAP) phase I (launched in 19930 and phase II (launched in 2001), which is part of the Ganga Action Plan (GAP) phase II (Sharma & Kansal, 2011). The visions of the Ganga Plan (GAP) inspired the National River Conservation Plan and included in the ecological repair and upgrading of water quality.

In the Philippines, the move to revive the historical Pasig River started during the term of former President Corazon Aquino when the country entered into a bilateral with Denmark in 1989. The Danish government funded 11 million DKK for the Danish International Development Assistance to conduct study on the river to determine what kind of assistance can be extended to facilitate its rehabilitation. Their study on the condition of the Pasig River revealed that the river’s water is dark and smelly and contained many solid waste sediments and very high in coliform. On the other hand, the report mentioned that there is a chance that the river be revived in 15 years provided that the government will raise 15 billion pesos for the rehabilitation programs of the river. The report identified 21 projects in all (nine priority and 12 support projects). This paved way for the establishment of Pasig River Rehabilitation Program (PRRP) in February 1993 and the River Rehabilitation Secretariat (eventually renamed as the Pasig River Rehabilitation Commission (PRRC) by virtue of E. O 54 in 1999) was tasked to coordinate with all concerned agencies under the Department of Environmental and Natural Resources. The goal to rehabilitate the Pasig River received funding assistance from the European Economic Community, World Bank, Japan International Cooperation Agency, the United Nations Development Program (UNDP), and the Asian Development Bank (ADB) (Alejandro, 2000).

ADB granted a policy loan to support policy reforms and an investment loan to support the investments, and a technical assistance (TA) grant to support capacity building (ADB, 2012). The package consisted of (i) policy reforms supported by a $100 million loan, (ii) investment loan of $75 million to finance needed public sector investments, and (iii) a TA grant of $1 million for institutional capacity building of agencies concerned with environmental management. The policy matrix included nine outputs, supported by various actions to be taken. Envisaged outputs were: (i) approval, adoption, and implementation of phase 1 of the program; (ii) provision of additional sanitation services beyond the Metropolitan Waterworks and Sewerage System (MWSS) targets; (iii) establishment of a wastewater discharge permit system for Metro Manila; (iv) improvement in domestic solid waste collection and recycling by riverside communities; (v) establishment of EPAs and URAs; (vi) strengthening of environmental standards and regulations; (vii) strengthening water quality monitoring and enforcement; (viii) enhancement of public awareness of environmental issues; and (ix) institutional strengthening (ADB, 2012). The Department of Finance was the executing agency for the policy loan, supported by 12 different national government agencies, five LGUs, and the private sector. The PRRC provided support and extensively coordinated with all concerned agencies (ADB, 2012).

A total of $176 million was loaned by ADB to the Philippine government to finance the rehabilitation of the Pasig River. These huge budget was used for the relocation of informal settlers, construction and operation of the ferry stations and improvement in the water quality of the river. The Pasig River Ferry Service revived as an alternative mode of
transportation to decongest city traffic inaugurated in February 2007.

Another expected output by the ADB was the establishment of environmental preservation areas (EPAs) along the riverbanks by December 2004 (ADB, 2012). The program will not only facilitate the improvement of the water quality of the river but it considered the welfare of the 10,000 Informal Settlers Families (ISFs) living on the river banks by giving them full serviced relocation sites and 80,000 families living in urban renewals (URAs) that will benefit from urban upgrading. On the other hand, the Pasig River Rehabilitation Commission (PRRC) is mandated to stop the dumping of solid waste, untreated liquid wastewater and septage into the river (PRRC EMC, 2014). PRRC needs to improve the river’s water quality (that is, to make it level Class C) and environmental condition of the entire river system. By virtue of Republic Act no. 9003, otherwise known as the “Ecological Solid Waste Management Act of 2000,” the PRRC should also undertake several solid waste management initiatives to ensure that the waterways of the Pasig River system have reduced, if not, free from solid waste (PRRC EMC, 2014). The end objective of these efforts is to attain Class “C” water quality of Pasig River and its tributaries as tasked to the Environmental Management Committee (EMC) which is composed of Department of Environment and Natural Resources (DENR) as Head, LLDA, Metropolitan Manila Development Authority (MMDA), Philippine Coast Guard (PCG), Philippine Navy (PN), Department of Health (DOH), Metropolitan Waterworks and Sewerage System (MWSS) and its concessionaires, Maynilad and Manila Water, and Housing and Land-Use Regulatory Board (HLURB) (PRRC EMC, 2014).

Methodology

Research design of the study used descriptive qualitative approach. Data gathered from the interview with key informants composed of department heads of the Pasig River Rehabilitation Commission, mandated to manage the rehabilitation of the river, and PRRC reports and from Asian Development Bank were analyzed. The study aimed to determine the factors that led to the deterioration and neglected state of the 27-kilometer Pasig River from being a majestic river that was once compared to the Grand Canal of Venice and to determine the impact of the 14-year program of the Philippine government to rehabilitate the Pasig river which was declared biologically dead in the 90s.

The following questions were asked in the interview with the officials from the PRRC in order to gather data relevant to the problems of this study:

1. What are the causes of the pollution of the Pasig River?
2. What were the projects accomplished during the 15-year rehabilitation program of Pasig River (2009-2014)?
3. What were the major challenges that the PRRC faced and continuously confronting the PRRC in restoring the Pasig River?

The theoretical framework used to evaluate the rehabilitation efforts to restore the Pasig River is the theory of collective action. Collective action takes place when individuals, government agencies, LGUs and the civil society groups work together and join hands in the pursuit of a common aspiration. Fundamentally, addressing
environmental issues generally require the active engagements of government, civil society groups like ENGOs and the public at large in order for programs to be effective. The full rehabilitation of the river requires knowledge, commitment, and participation of the communities living along the banks or near the river and other stakeholders. This will succeed when the large numbers of people who must undertake these activities have respect for, and confidence in, the decision-making system and are willing to follow the law (Bruch, 2005). Without the cooperation of everyone due to conflicting interest, collective action will not be achieved. This aspiration to restore the river cannot be achieved solely through the engineering and building of infrastructure to clean the river, the government should also exercise political will and educate the public how to participate in their programs through information dissemination campaigns (PRRC EMC, 2014).

Results

What kinds of wastes are found in the Pasig River? According to the PRRC-EMC report in 2014, one of the most serious problems of non-point sources of pollution that results to the continuous degradation and unaesthetic condition of the Pasig River system especially the tributaries is the indiscriminate dumping of solid wastes.

A year after the Pasig River was pronounced dead by the DENR in 1990, 300 metric tons per day (MTPD) of BOD (Biochemical Oxygen Demand) was discharged which consists of domestic (45%), industrial wastewater (45%) and solid wastes (10%). In 2000, despite the reduction of the total BOD to 240 MTPD, the significant change in the percentage of pollution contributed by the different sources was recorded as: domestic liquid waste (65%), industrial wastewater (30%), and solid wastes (5%). The increase in the domestic waste is blamed to overpopulation because of migration from rural to urban centers (PRRC-EMC, 2014).

In the 2014 study made by PRRC-EMC on Estero de Sampaloc, a minor tributaries of the Pasig, they identified the sources of pollution of the esteros. The committee were able to cite at least three areas of concerns such as indiscriminate dumping of solid wastes, discharges of untreated raw wastewater from the households and small-scale establishments (i.e. food stalls, car wash shops, laundry shops, etc.), unidentified illegal tapping to the drainage canals that directly go to the waterways, and discharging (PRRC-EMC, 2014). Domestic wastewater is typically composed of human excrete and silage from the water used up by residential, commercial and institutional establishments after its intended use. This type of wastewater is entirely different from the effluent of industrial wastes in terms of composition and variability (Liu & Liptak, cited in PRRC-EMC, 2014). Effluent is defined by the Philippine Clean Water Act of 2004 (R.A. 9275) as ‘discharges from known source which is passed into a body of water or land, or wastewater flowing out of a manufacturing plant, industrial plant including domestic, commercial and recreational facilities (PRRC-EMC, 2014).’ Based on the study of PRRC-EMC (2014), domestic wastewater causes pollution if it is directly discharged to the Estero de Sampaloc by the commercial, domestic and industrial with or without septic tanks. The results of the study show that the 17 drainage canals received the solid and liquid wastes from illegal tapping of unsewered communities and establishments without Septage Treatment Facilities (STP). In the 685 households and 64 establishments surveyed from the 11 barangays of Estero de
Sampaloc, 244 (35.62%) households and 1 (1.5%) establishment do not have septic tanks. The following were recommended to manage domestic wastewater: installation of grease interceptor, construction of individual septic tank, connection to Maynilad Sewer Line, community septic tank, and closure of sewer outfalls (PRRC EMC, 2014). The study also suggested a solution that might prevent the solid waste thrown in the esteros going directly to the Pasig River, such as the installation of a garbage trap made of fishing nets. The installation of these traps were done in 2015.

The 15-year rehabilitation program of the Pasig River from 1991 to 2014 aimed to improve its water quality and the esteros and tributaries connected to it, saw several projects led by PRRC in collaboration with its partner agencies and Local Government Units (LGU) LGUs of Manila, Mandaluyong, Quezon City, San Juan and Makati. These notable projects include the removal of informal settler families (ISFs) along the waterways, dredging/desilting works, slope protection, development of linear parks, enforcement of effluent monitoring of industrial and commercial establishments’ wastewater treatment facility installation/construction.

Since the implementation of the Pasig River Rehabilitation Program in 1999, it has made efforts to improve the water quality of the river attributed to the program’s various efforts to reduce pollution at source by involving companies in waste minimization projects which resulted in the reduction of Biochemical Oxygen Demand (BOD) loading. The reduction of domestic liquid waste accounted for at least 60 percent of the Pasig River’s BOD load due to inadequate sewerage system in Metro Manila continue to be the biggest challenge (PRRC Annual Report, 2014).

Improvements in the surrounding environment brought about by the resettlement of nearly 4,000 Informal Settler Families (ISFs) living in the danger zones along the Pasig River were also accomplished. Part of the ISF resettlement is to upgrade the river’s aesthetic value through the construction of linear parks and promenades along the riverbanks with the Local Government Units’ (LGUs) coordination. In 2014, PRRC was able to transfer 1,175 ISFs from the 12 minor tributaries draining to Pasig River (PRRC, 2014).

The PRRC in cooperation with partner agencies began the restoration and improvement of the tributaries in 2010 with the pilot project in Estero de Paco through the Kapit Bisig para sa Ilog Pasig (KBPIP) project of the ABS-CBN Foundation, Inc. (AFI). Later on, PRRC started the rehabilitation of Estero de San Miguel in 2011, Estero de Concordia, Estero de SanSebastian, Estero de Aviles, Estero de Balete, Estero de Sampaloc, Estero de Valencia, Estero de Quiapo, and Estero de Uli-Uli. In 2013, it began the rehabilitation of waterways in Quezon City, namely: Pasong Tamo Creek, Culiat Creek, and San Francisco River (PRRC, 2014). PRC also initiated in 2014 the installation of garbage traps in the following tributaries: Estero de Sampaloc, Estero de Aviles, Estero de Uli-Uli, Estero de San Miguel, Estero de Quiapo, Estero de Valencia, Estero de Concordia, and Pasong Tamo Creek. The program was envisioned to decrease the trash clogging the waterways (PRRC, 2014).

The Environmental Preservation Areas (EPAs) were developed into linear parks, walkways, and promenades along the Pasig River and its tributaries with the 10-m and 3-m wide easements. EPAs serve as buffer zone between the main river or estero and adjoining built-up areas, to stop the dumping of wastes to the waterways. There are 44 EPA-linear and pocket parks constructed from 2000-2013 which are located in Manila (20), Makati
The biggest challenge facing the Pasig River's rehabilitation is the long process of relocating slum communities living along the riverbanks. In fact, 65% of waste dumped into the river comes from these households. The establishment of EPAs meant relocating thousands of squatter households to adequate resettlement areas and providing them with affordable housing, livelihood opportunities, and other development support (PRRC, 2014).

Environmental Non-Governmental Organizations (ENGOs) also played a very important role in the 15-year rehabilitation program of the Pasig River. Notable ENGOs who took part in the restoration of the river were Clean and Green Foundation, Inc. (CGFI), Sagip Pasig Movement (SPM), and Kapit Bisig Para sa Ilog Pasig (KBIP). Based on the data collected, these ENGOs participated successively and not simultaneously with one another. In the case of the CGFI and SPM, these ENGOs were very active throughout the Ramos until the Estrada Administration but it became inactive in the succeeding administrations. The KBIP became most involved in the rehabilitation of the Pasig River especially when ABS-CBN Foundation Chairman Gina Lopez was appointed as the Chairperson of PRRC in 2010 under the Aquino administration.

The Kapit-Bisig Para sa Ilog Pasig under the ABS-CBN Foundation constituted in 2009, was credited for establishing the Pasig River Warriors in 2010, composed of residents living on the riverbanks in charge with the maintenance of the cleanliness of the river and its surroundings and guarding banks. At present, the River Warriors are under the PRRC and receive wages in maintaining the 15 developed Environmental Protected Areas (EPA) (Interview with PRRC Key Informants). KBIP became a household name because of the huge success of the “Run for the Pasig River” joined by thousands of runners in support for the rehabilitation of the Pasig River. In 2013, 16 esteros underwent rehabilitation through the partnership of PRRC and KBPIP which drew inspiration from the success of the pilot project of the rehabilitation of the Estero de Paco in 2010. The KBIP provided a strong media mileage for the rehabilitation of the river because it is connected to the ABS-CBN media group. In 2013, the 4 runs organized by the KBIP had raised a total of P25.94 million pesos which was used to fund the rehabilitation of esteros which began in 2009 (ABS-CBN Foundation, 2013).

Despite lack of funding, the CGFI, SPM and KBIP had contributed to the rehabilitation programs of the government to revive the Pasig River largely through various activities mainly on information dissemination and education efforts to raise awareness about the environment to inspire public participation in order to bring significant impact on the rehabilitation of the river.

Discussion

The problems seen in this study as the principal causes of the pollution of the river are the poor sewerage and sanitation systems that hamper the improvement of the waterways in the urban centers that are connected to the Pasig River. This problem cannot be addressed immediately because based on the masterplan of the MWSS in 2014, sewerage and sanitation services will be completed in 2037 (PRRC-EMC, 2014). For the
meantime, the residents can help reducing the pollution if they will practice proper disposal of solid and liquid waste. The LGUs should also strictly monitor the implementation of the ordinances about the waste disposal.

Another obstruction to the rehabilitation of the river is that there are many ISF remain firm to their decision not be relocated to socialized housing units. In a study done by Orozco & Zafaralla in 2012, ISFs refused to leave their homes along the estero being their birthplace and its proximity to their work and schools of their children. In 2012, there are about 60,000 families or 300,000 to 500,000 informal settlers living on the banks of the Pasig River (Gilles, 2012).

The ADB Validation Report (2012), however, assessed that ‘the overall rehabilitation program of the Pasig River was unsuccessful.’ The rehabilitation program of the Pasig River is not sustainable because of many loopholes seen in the project proposal and implementation. The original project proposals were altered in the course of the implementation and financing arrangements which caused the delay of the rehabilitation of the river. ADB identified challenges on the groundwork of the program such as “lack of political support, weak enforcement of environment regulations, and reluctance of squatters to relocate.” It was also observed that the mandate of PRRC to implement the program is not clear and it has no power to influence government agencies and policy-making bodies and lacks political support.

It is not absolutely fair to say that the program is a total failure. The Pasig River Basin Rehabilitation program succeeded in reducing the pollution of the river through its clean-up operation such as dredging, putting of waste trap and cleaning of esteros by the river warriors. The condition of the Pasig River has significantly improved compared to its state in the 1990s when it was declared biologically dead by the DENR. Although it has yet to attain the level C water quality level that it is aspiring for, some areas of the river have been developed conducive for tourism and transportation.

Conclusion

The PRRC, as the government agency mandated to manage the restoration of the Pasig River, should continue educating the citizens, LGUs and other stakeholders about the proper disposal of solid and liquid wastes to sustain the rehabilitation of the Pasig River. It should constantly communicate with the LGUs to make sure that septic tanks will be constructed for household and commercial use. A long-term plan of addressing the issue on the drainage system is needed as until the sewerage system and STP are not constructed by the water concessionaires (Maynilad and Manila Water), all wastewater will go directly to the rivers in the absence of septic tanks, thus, polluting the river.

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THE READINESS OF PUBLIC HIGHER EDUCATION INSTITUTIONS (HEIs) IN MALAYSIA TOWARDS PREPARING COMPETENT HALAL HUMAN CAPITAL

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Abstract:
Halal Industry has become the fastest growing industry and new growth sector for the global economy. Malaysia aims towards becoming the global center for Halal integrity and the global leader in the innovation, production, and trade of halal-related sectors. Human Capital Development is a fundamental requirement needed by Halal Industry for there to be growth and innovation. However, a major challenge faced by Halal Industry is lack of human capital such as a specialist in each field. The Halal industry needs human capital that has skills and expertise in both Shariah and science that are related to halal. The academic sector is now being tapped to serve as a thrust to produce competent halal human capital for the development of the Halal industry. Therefore, the purpose of this paper is to identify the readiness of Malaysian Public Higher Education Institutions (HEIs) towards preparing competent halal human capital. This study applies the method of literature review through content analysis of documents. Most Malaysian Public universities have taken part in halal industry and a few universities have established its own halal research centers. A few universities have offering halal related courses at an undergraduate and postgraduate level as well as short courses for the local communities. Public universities have strengthening halal knowledge through their courses, training, research, collaboration and product development. The literature indicates that Malaysians Public HEIs has effectively positioned themselves as an academic institution that meets the demands of the halal industry.

Keywords: Halal Industry, Human Capital, Higher Education Institutions (HEIs)

1. Introduction:

Halal is an Arabic term which literally means permissible or lawful and this term applied to all aspects of life and covers not only food and drink but also all matters of daily life. The antonym of halal is haram which literally means unlawful or forbidden. Halal has been recognized as a new benchmarked for safety, hygiene and quality assurance even by non – Muslims consumers (Muhammad, Isa, and Kifli, 2009). Halal Industry has expanded beyond food sector which includes pharmaceutical, cosmetics, health products, toiletries, and medical device as well as service sector including logistics, marketing, and financing. The halal industry also expands further to lifestyle offering halal travel and hospitality service as well as fashion. Compared to other countries where halal is led by either Islamic

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communities or Islamic non-government organizations (NGO), Halal industry in Malaysia is regulated by two main agencies which are the Department of Islamic Development Malaysia (JAKIM) and Halal Industry Development Corporation (HDC). JAKIM is responsible for the matters related to halal certification and compliance to halal standard while HDC responsible to coordinates the overall development of the Halal Industry in Malaysia.

Malaysia, among the earliest country to start the Halal Industry, has aimed to become a global halal hub based on the Second Industrial Master Plan (1996 – 2005). However, the position has not yet been achieved and Malaysia is still striving to become world halal hub with its Third Industrial Master Plan (IMP3) (2006 – 2020) (Ohno, 2009). Despite the rapid growth and expansion of halal industry, this industry still has a shortage of skilled and experienced professionals who can work in the halal industry. Lack of human capital is identified as one of the challenges faced by halal industry such as specialists in each field mainly related to the field of shariah (Khan, 2011). Meanwhile, in academic perspective, Jonathan (2015) has revealed that during his own research, there was an absence of Halal curriculum when compared to the amount of the knowledge in this area and its current growth and expansion. Therefore, the biggest challenge in the halal industry does not come from natural resources and conditions but from a shortage of competent human capital.

The academic sector is now being tapped to serve as a thrust to produce competent human capital for the development of Halal industry in Malaysia. As Rahmah (1996) stated that human capital development can increase a nation’s human capital stock through education. With this regard, it is important to understand the readiness of Malaysian Public Higher Education Institutions (HEIs) towards preparing competent human capital for the development of halal industry in Malaysia. The objective of this study is to review and evaluate as a preparation on what has so far been done by Malaysian Public HEIs towards preparing halal human capital especially in the aspect of curriculum, training and research and development (R&D).

The methodology used in this study is through documents analysis of secondary data from the previous studies and relevant literature reviews. Other additional information is gained from various documents and references from the official website of the universities. There is little study related to human capital in a halal industry that has been done. Therefore this paper attempts to fill the gap in the current research.

2. Background Study:

Human Capital development is a fundamental need that has to be fulfilled for there to be growth in any sector especially new industry like halal industry. Borzooei & Asgari, (2013) in their in-depth interviews with the halal experts concluded that human capital is the vital requirement needed for a country to establish itself as a global halal hub. Halal from its simple traditional understanding in the past could not cope with the advanced technology in the food and non-food production today. The production has become more complicated than before. In order to produce competent human capital, universities as academic institutions need to implement changes in their strategy, structure, process, and

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225 Shariah means the ‘path’ and shariah law refers to the whole system of principles and rules which a Muslim is required to live by. The Quran calls the shariah as a way of life set by God (Quran 45:18).
Readiness means the state of preparedness of person, systems or organizations to meet a situation and carry out a planned sequence of actions. Readiness is based on thoroughness of the planning, training of the personnel, and supply of the support services or systems. Psychologists and sociologists commonly employ four concepts to measure readiness which is attitude, values, opinion, and belief (Othman, Hashim, and Ab Wahid, 2012). However, each researcher has a different approach in measuring the readiness in higher education.

Eslaminejad, Masood, and Ngah, (2010) use knowledge, attitudes, skills, and habits as factors to assess academic member’s readiness. While (Saekow, & Samson, 2011) found that policy, technology, financial, human resources and infrastructure are the measure elements for readiness. While, Susanto (2008) suggested seven aspects of change readiness which is perception towards change, vision for change, mutual trust and respect, change initiative, management support, acceptance and how the organization manages the change process.

For the purpose of this study, knowledge, skills, and training will be chosen as the indicators to assess the readiness of Public Higher Education in preparing halal human capital. The chosen aspects also correlate with the definition of human capital itself.

**Human Capital in Halal Industry**

The growth of Halal Industry depends very much on its manpower skills. This industry not only require competent human capital at managerial and executive level but also at supervisory, middle and low level. They are the persons who make and runs the daily operation of business entities (Jais, 2014). In order to produce halal products, the company does not require to be run, operate or owned by Muslim but it is sufficient if the products are produced under strict regulation, supervision, support, and guidance. However, the trained and competent Muslim production inspector must ensure the halal needs and standard requirements are fulfilled (Hashim & Shariff, 2016).

In contrast with other industries, Halal Industry require human capital that has knowledge in Shariah and Islamic Principles relating to halal, and to have technical skills, business knowledge in sourcing, production and manufacturing, products and services, purchasing, store and inventory that are related to business and operations (Shariff, Mohamad, and Hashim, 2016). In simple words, human capital in the halal industry can be described as individuals who possess knowledge, skills, competencies and Shariah knowledge that are related to halal business and services. Halal workforce also needs to have awareness of halal haram principles and halal management. They also need to make sure that all part of the supply chain from raw material to final product should be conducted according to halal best practices including logistic activities. Halal logistic activities involve halal transport, halal warehouse and halal retail (SIRIM, 2010).

**Human Capital Development through Public Higher Education Institutions**

Human Capital was first introduced by Schultz (1960) and later developed by Becker (1964) in the early sixties. Schultz has defined human capital as a key element in improving firm assets and employees in order to increase productivity as well as to sustain
competitive advantage. Similar to his thought, a few researchers concurred that the human capital can be firmly connected to knowledge, skills, education, and abilities (Garavan et al., 2001 & Youndt et al., 2004). While Bontis (1999) describe human capital as the human factor in the organization that encompasses knowledge, skills and competencies and attributes embodied in individuals which make it possible for them to effectively do their work and creates value. While human capital development refers to a process that relates to training, education and other professional initiatives in order to increase the level of knowledge, skills, abilities, values and social assets of an employee which leads to the employee’s satisfaction and performance and eventually on a firm performance (Arif, & Ahmad, 2011).

Education is an important medium to improve the development of human capital particularly for the halal industry. For Islamic countries like Malaysia, Halal education is the backbone of the countries development with the purpose of providing knowledge and skills to many parties for the country prosperity (Jamaludin, Kamarudin, and Ramli, 2015). Higher education has been known as institutions in providing services to aid students in human capital development through a mechanism such as teaching, mentoring and training. It is recognized by researchers that human capital and education are two essentials key that has a significant relation in contributing towards economic growth (Islam, et al, 2016; Ismail & Yussof, 2010; Mansur, Kogid, and Madais, 2010; Olaniyan D. A. & Okemakinde T., 2008).

Based on human capital and social efficiency theories, universities should prepare and supply future workers with appropriate knowledge and skills that would enhance their productivity and upward mobility, therefore, will promote economic growth (Schultz, 1961; Becker, 1964; Harbison, 1974). Ismail, Ghani, and Abdullah (2011) in their study agreed that Malaysian public universities have given high priority in the aspects of human capital development, programs development policy and programs quality in their academic programs offered.

This is important to avoid skills gap and talent mismatch. Talent mismatch in this sense refers to the disparity in skillsets between what is required by the halal industry and the skills that graduates possess. Based on the talent development survey done by Finance Accreditation Agency (FAA) in 2014 found that graduates in Islamic Finance lack of many basic skills such as critical thinking, strategic planning, technical knowledge and practical experiences contributing to the rising number of unemployed graduates in Islamic finance. In order to overcome the incompetency of halal human capital, universities play important roles in helping Malaysia to produce the first-class mentality workforce in the knowledge-based economy and innovation field (Othman, Othman, and Ismail, 2012).

3. Results and Discussion:

3.1 Halal Research Centres

Realizing the need to develop skilled halal human capital in propelling the halal industry, some universities have taken initiative by setting up halal related research centres and services in the universities as stated in Table 1. Halal Product Research Institute (IPPH) under University Putra Malaysia (UPM) is one of the pioneer halal related research institutions that has been set up. IPPH was established in 2005 under the name of the Halal
Food Institute and was renamed to IPPH in 2006. This halal research centre serves as a one-stop centre approach through a comprehensive, balanced and multifaceted to study all aspects of halal products in national and global levels.

While International Institute for Halal Research and Training (INHART) at International Islamic University of Malaysia (IIUM) was established in July 2006 with the objective to assist the government’s aspiration to put Malaysia as the global halal hub, to assist Halal Industry efforts globally and also to provide world-class education, training, and consultancy related to the Halal Industry to the nation and beyond. INHART office has also been set up at Chonbuk National University Seoul in Korea in April 2016 after signing a collaborative agreement between both universities to develop collaborations on halal based research, academic programs, training, and halal certification projects. Another INHART’s office has also been set up at Pingliang, China to cater for activities on halal based projects which include the establishment of INHART-Pingliang Halal Certificate Body, Halal training, consultations, research, and academic programs (inhart.iium.edu.my).

Meanwhile, Halal Research and Management (IHRAM) in University of Islamic Science Malaysia (USIM) is officially started on 1st January 2010 with a manifestation to become an advanced institute for Halal Governance and Science in resolving community issues through planning, strategic restructuring, research and development (R&D) and services. (ihram.usim.edu.my).

Table 1: Halal Research Centres

<table>
<thead>
<tr>
<th>Halal Research Centres in University</th>
<th>Field</th>
<th>Product Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Halal Product Research Institute (IPPH) at University Putra Malaysia (UPM) (<a href="http://www.halal.upm.edu.my">www.halal.upm.edu.my</a>)</td>
<td>Shariah, Law, Economic, Tourism, Analysis Services, Agriculture, ICT, Science and Technology</td>
<td>Research and development analysis of Haram and Najis contaminant and adulterants to promote halal research networks and innovations</td>
</tr>
<tr>
<td>International Institute for Halal Research and Training (INHART) at International Islamic University of Malaysia (IIUM)</td>
<td>Shariah Science and Technology</td>
<td>Research, development, innovation, and commercialization of halal products, pharmaceutical, and consumer products. Shariah-compliant service industries like tourism and hospitality. Detection system for non-halal products, Biomarker for non-halal ingredients Halal Certificate consultancy</td>
</tr>
</tbody>
</table>
3.2 Formal Education

There are public higher education institutions in Malaysia that already offer courses related to halal (See Table 2). These courses known as Halal studies and being offered to both undergraduate and postgraduate level. Halal studies are defined as ‘scientific knowledge with a multidisciplinary program which is based on a halal concept or halal framework’ (Ahmad, et al, 2011). Halal studies in university seem as the right platform to prepare qualified people in Halal Industry since halal from its simple and traditional knowledge in the past could not cope with the advance technology nowadays. Halal studies as new academic programs need to integrate science and technology with the expertise in Islamic Law based on Al Quran and As-Sunnah.

During World Halal Summit (WHS) 2015, all panelists agreed that halal curriculum has the potential to groom students to be more employable and enter a wider range of career fields upon completion. Dr. Marco Tieman during the summit also suggested to include lectures on halal matters into existing courses as a way to fill the gap in halal education as this could be more effective and quicker than designing a unique halal course from scratch. University of Malaya has followed his suggestion by offering academic courses such as Consumerism Fiqh/ Fiqh al-halal wa al-haram which is offered by the Department of Fiqh and Usul, Academy of Islamic Studies. University of Malaysia Sabah (UMS) through the School of Food Science and Nutrient (SSMP) also offers an academic program with their elective course namely ‘Introduction to Halal Food’ under the Centre of Knowledge and Language Upgrading since 2012. This subject is offered to all students from different fields across the campus of UMS (Sidik, Ramli, and Jamaludin, 2016).

<table>
<thead>
<tr>
<th>University</th>
<th>Field</th>
<th>Course offer at undergraduate and postgraduate level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institute of Halal Research and Management (IHRAM) National University of Islamic Science (USIM)</td>
<td>Shariah Science and Technology</td>
<td>Research and development (R&amp;D) on lab analysis methods, system and case studies</td>
</tr>
<tr>
<td>International Halal Research University Malaya (IHRUM) at University of Malaya</td>
<td>Shariah Science and Technology</td>
<td>Research and development (R&amp;D) on lab analysis methods, system and case studies</td>
</tr>
<tr>
<td>Doping Control Centre at University of Science Malaysia (USM)</td>
<td>Science and Technology</td>
<td>Halal Ovine (sheep) collagen Halal vaccine</td>
</tr>
<tr>
<td>Malaysian Institute of Transport (MITRANS) Halal Food and Research Centre at ‘Universiti Teknologi Mara’ (UITM)</td>
<td>Shariah Science and Technology</td>
<td>Halal Logistic Halal functional food, and fats &amp; oils chemistry</td>
</tr>
<tr>
<td>Halal Informatics Research Centre (Holistic) at ‘Universiti Teknologi Malaysia’</td>
<td>Science and Technology</td>
<td>Halal Logistic Halal Data</td>
</tr>
</tbody>
</table>

(Source: Various sources)
<table>
<thead>
<tr>
<th>University/Malaysia &amp; Degree</th>
<th>Field of Study</th>
</tr>
</thead>
</table>
| University Putra Malaysia (UPM) | Islamic Multidisciplinary Masters and Doctorate Degrees specializing in:  
- Halal Products Science  
- Halal Products Development  
- Halal Products Management  
- Shariah and Halal Laws |
| International Islamic University of Malaysia (IIUM) | Islamic Multidisciplinary - Doctorate degrees in Halal Industry  
- Masters of Science in Halal Industry Science  
- Master of Halal Industry Management |
| Islamic Science University of Malaysia (USIM) | Islamic Multidisciplinary - Master of Muamalat Administration (Halal Products)  
- Bachelors Program of Fiqh Fatwa in Food  
- Bachelors Program in Shariah Majoring in Halal (Curriculum development stage) |
| University Malaysia Pahang (UMP) | Islamic Multidisciplinary - Bachelor in Halal Administration and Management Halal Research |
| University of Malaysia Sabah (UMS) | Islamic Multidisciplinary - Bachelor of Islamic Studies and Food Technology  
- Doctorate Degree in Halal Food |
| Universiti Teknologi Mara’ (UITM) | Islamic Multidisciplinary - Master in Halal Science  
- Doctorate degree in Fiqh Science and Technology |
3.3 Training

Training is another channel in developing skilled human capital. Table 3 below presents the list of public higher education institutions that provide and conduct several halal training programs. Alina et al (2013), has mentioned that scientists, researchers, and industry players need to attend Fiqh courses to understand the tools and principles that Islamic Scholars use to derive ruling. Same goes to Islamic scholars, they also need to take courses related to technical aspects of halal production and processing. The development of the training module that complies with the standard and manual procedure or protocol requirements would increase employee motivation, satisfaction, morale, competitiveness, consistency message, efficiency, reduce employee turnover and increase innovation in strategies and products (Pahim, Jemali, and Mohamad, 2011).

Collaboration have been done between universities and agencies which have skills and experiences in conducting training halal programs such as Halal Industry Development Corporation, Global Integrity Products and Services Sdn Bhd (GIPS), Religious Affairs Department and Chemical Company Malaysia Berhad (CCM), Malaysian Bioeconomy Development Corp (Bioeconomy Corp), Malaysia Agriculture Research and Development Institute (MARDI) and Standard and Industrial Research Institute Malaysia (SIRIM). Necessary courses and training in the knowledge transfer program were designed to meet the identified target groups. It covers the aspects of knowledge that is needed to become a professional workforce.

<table>
<thead>
<tr>
<th>University</th>
<th>Training Program</th>
</tr>
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<tbody>
<tr>
<td>International Islamic University of Malaysia (IIUM)</td>
<td>- Collaboration with HDC on 6 months Halal Executive Training Programs</td>
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<tr>
<td></td>
<td>- Halal Industry Awareness Program</td>
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<tr>
<td></td>
<td>- Awareness on Halal Slaughtering</td>
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<tr>
<td></td>
<td>- Islamic Hygiene Practice (Sertu)</td>
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<td></td>
<td>- Malaysia Halal Certification</td>
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<td></td>
<td>- Halal Assurance System</td>
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<td></td>
<td>- Certification on Halal Internal Audit</td>
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<tr>
<td></td>
<td>- Halal Lead Auditor Program</td>
</tr>
<tr>
<td>University Putra Malaysia (UPM)</td>
<td>- Halal Slaughtering Training</td>
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<tr>
<td></td>
<td>- Halal Executive Course</td>
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<tr>
<td></td>
<td>- Halal Awareness Course</td>
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<tr>
<td></td>
<td>- Workshop on Halal Analysis: Amino Acid Profile</td>
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<td></td>
<td>- Workshop on Halal Analysis: Alcohol</td>
</tr>
<tr>
<td></td>
<td>- Halal Analysis: Introduction to DNA Analysis</td>
</tr>
<tr>
<td>Islamic Science University of Malaysia (USIM)</td>
<td>- Collaboration with HDC on 6 months Halal Executive Training Programs</td>
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<tr>
<td></td>
<td>- Executive Training Programs</td>
</tr>
<tr>
<td></td>
<td>- Collaboration with Biotechcorp, HDC,</td>
</tr>
</tbody>
</table>
3.4 Research and Development (R&D)

Research and development programs are significantly shaping the competencies of the Halal Industry in human resource development. There is an increasing number of halal research done by Public Universities in Malaysia particularly on research related to Halal traceability, slaughtering, a radio frequency identical detector (RFID), food adulteration and authentication, development of scientific methods, testing methods and validation, genetically modified food, pharmaceutical, logistics and consumer behavior research.

University of Science Malaysia (USM) and Finlay Institute of Cuba has created history by signing the Agreement of collaboration and joint production of the halal tetravalent meningococcal ACW135Y vaccine. This strategic collaboration Malaysia – Cuba has resulted in innovation in the field of biotechnology as the team has discovered a halal formula for producing a vaccine. This discovery is expected to benefit Muslims who currently have to depend on non-halal vaccines.

International Institute for Halal Research and Training (INHART) in IIUM has discovered smart and quick detection system for non-halal products, investigation of a potential biomarker for non-halal ingredients, halal vaccine, and development of halal food processing technology. Even though research and development did by public universities are not comprehensive but universities have shown that awareness of halal research has increased and the area of interests are growing with the assistance of advanced technology compared to R&D activities 20 years ago (Alina, 2012).

Conclusion

Based on the discussion above, it can be concluded that Malaysians Public HEIs has effectively demonstrated themselves as academic institutions that meet the demands of the halal industry. They are ready in supplying halal human capital to the need of halal industry. Public universities have strengthening halal knowledge through their curriculum, training, research and development (R&D), collaboration with halal agencies and industries and through product development. The establishment of Halal Research Institutes in public universities has helped to contribute to the country’s economic growth through human capital development. However, for Public Higher Education Institutions there are much more room for Halal education to grow and much more to be done. Further study should be done by involving private universities and polytechnics in measuring their readiness in creating halal human capital to the needs of halal industry.

Acknowledgement

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References:


STRENGTHENING THE INNOVATION OF CLINICAL LEGAL EDUCATION IN CREATING PROFESSIONAL GRADUATES AND LEGAL REFORMERS IN INDONESIA

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ABSTRACT

Mochtar Kusumaatmadja, Indonesian law professor, criticized the legal system of higher education in Indonesia because it only educates people to be handyman. He stated that the legal education system is aimed to empower its graduates with professional skills and legal reform in society. The reform of legal education was marked by the introduction of the curriculum 1993 by introducing clinical legal education programs in several law schools in Indonesia. This program is an innovation which is imitated from a law school in the United States aimed at graduates of law faculty to be well-prepared in working in the legal profession in the future. This paper discusses two main issues: First, how is the clinical legal education and the pattern applied by some universities in Indonesia now? How to strengthen the clinical legal education program in realizing professional graduates as well as reformers in the field of law? The method used is literature study that comes from books, and journals. The results of this research: first, the legal clinic education program in Indonesia has been applied only in 5 universities in Indonesia. There are 4 clinics that have been implemented namely anti-corruption, criminal, civil, women and children, and the environment. Secondly, to strengthen this program as it is aimed to create professional graduates and reformers in the field of law is by improving the quality of teachers, the availability of facilities and infrastructure, expanding cooperation with various institutions of clinical partners, and make it compulsory subject and apply it in other law faculties in Indonesia.

Keywords: Clinical Legal Education; Professional Graduates; Innovation; Legal Reformers; Indonesia.
1. INTRODUCTION

Legal education of its existence has always been part of the history of Indonesian nationality. The conditions of state administration and higher education of the law can not be separated, between the two of them affect each other. Legal education greatly affects the political face of statehood of a time, and on the other hand the orientation of legal education is also strongly influenced by the growing political order. The implementation of legal education and its orientation is not an autonomous process, but a process that is demanded to functionally follow the political development. Particularly the politics concerned with government policies and efforts to use law and / or justice.

In general, legal education is categorized into two types: academia and profession. Academic law education aims to provide legal knowledge for students. Academic law education teaches what is meant by law, what are the branches of jurisprudence, who is the subject of each jurisprudence, what principles are contained in the law, and others. The knowledge given is more theoretical, which can not simply be applied in real life.

While the legal education profession aims to provide an understanding of how to apply the law. To run the law well, it takes legal education that is not only charged theory, but also education that helps people run the legal profession. Expected with professional legal education, learners have expertise in applying the law (Hikmahanto: 2013).

One opinion is based on the legal profession in Indonesia should be done after graduating from law faculty. Studying professional skills can only be held in practice, whereas college education only aims to provide a basic academic knowledge of common law (Mochtar: 2015). This view develops in countries in Europe where professional skill coaching is overlooked, even ignored. Different views, based on legal education methods in the United States whose college law is a professional school. Where the graduates are expected to have the necessary professional skills in the legal profession in addition to academic education.

In Indonesia, the higher education orientation of law is always changing following the regime change. From time to time the orientation of higher education law stuck between two dichotomy that is with the aim to produce professionals to fill the job market either as professional or academic and higher education law is oriented to legal science proficiency.

Clinical Legal Education is a method of learning that is widely used by higher education law in various countries to teach their students the skills, values and views of law and human rights. Clinical legal education in various countries provides benefits for the development of legal education and social change as in the United States, Latin America, Eastern Europe and South Africa. On the other hand, clinical legal education will have a positive impact on the reputation of the organization of higher education law.

Clinical legal education in Indonesia has been known since 1970 when the minister of education and culture issued a decree (SK) No. 0198/1972 which introduced clinical legal education and established legal aid agencies (LBH) in several law faculties. From here, it is known that various types of legal skills are known as Legal Proficiency Training (PKLH)
such as contract drafting, drafting of legislative drafts, studying litigation kemahairan, and students also doing apprenticeship practice at the Campus Legal Aid and Consultation Institute (LKBH) where the legal clinic is run by students with lecturer supervision but is not covered in the semester credit system (SKS).

In its development, in Indonesia there is a legal clinic that is Innovated and different from PKLH and Internship in LKBH is not the same as applied in 5 universities in Indonesia, where in this new legal clinic, students acting as practitioners under the supervision of mentors and lecturers, to the syllabus, the module and sourced to the existing sessions unit (SAP) by facing the real case. So with the legal clinical innovation of this model in addition to improving knowledge and skills in the lecture will also be taught about the concept of social justice.

2. METHODOLOGY

2.1 Research methods
The approach method used by the author on "Strengthening The Innovation of Clinical Legal Education in Creating the Professional Gratuates and Legal Reformers in Indonesia" uses literature study towards secondary data such as books, journals, theses, dissertations, legal sources and some references. It also uses normative juridical approach method which is library research, that is research on secondary data. (Soemitro, 1988)

In the specification of this study is descriptive analytical method which is used to describe an ongoing condition or circumstance that the goal in order to provide data about the object of research so that it can explore the things that are ideal, then analyzed based on legal theory or legislation, applicable invitations. (Ali, 2009).

To obtain the necessary data in this study adjusted to the approach method and the type of data used. In accordance with normative juridical research, the data used is secondary data. Secondary data is data that has been processed derived from literature study. Primary legal materials used by the Author consists of basic norms (Pancasila), the 1945 Constitution, legislation and legal materials are still valid. (Muhammad, 2004)

2.2 Theoretical Review

1. Clinical Legal Education
Clinical Legal Education is defined in different ways throughout the country, sometimes also defined differently in different law faculties but in the same country. The term of clinical legal education in this case can be defined as "a learning process with the intention of providing law students with practical knowledge, skills, values in order to bring about legal services and social justice, the basis of interactive and reflective teaching methods (The Indonesian Legal Resource Center (ILRC): 2014).

Knowledge Element is an element related to practical knowledge for students. Social Justice, law and human rights is an example of Knowledge that must be mastered by students. For skills (Skills) related to mastery of student skills such as lawyering technique, advocacy skills and others. While values are related to the alignment of social justice values.
To develop it requires three components that are the glue of walking clinical legal education, namely:

a. The planning component, students prepare and plan for a real legal practice experience. In the planning component, students and supervisors formulate a practice program that benefits both the students themselves and the legal clinic.

b. Components of practice, students test the ability of lawyering skills of students with supervision from senior lecturers or competent practice lawyers.

c. The reflection component, associated with the student process reflects on his experience and the evaluation of the student as well as on the organization of the clinical legal education itself in general.

There are a number of objectives of Clinical Legal Education, among others; teaching legal theories, the expertise of professional practices, and professional responsibilities, introducing students to social justice issues through their experience in advocating marginalized groups. The purpose of other clinical legal education, namely:

a. The legal clinic program is aimed at providing structured educational opportunities for students, to augment the student experience in real memorization practice or through simulation of clients, as well as to acquire the knowledge, expertise, and values of the experience;

b. Legal clinic is intended to increase support for legal assistance to marginalized communities;

c. The legal clinic is aimed at instilling the spirit of pulik and social justice services, and to developing the basis for the development of professional legal profession;

d. Supervisor lecturers in legal clinic contribute to the development of scholarship on skills and practical legal theories that link the academic world with the bar organization more closely;

e. The use of interactive and reflective teaching methods that drive students to perform the above-mentioned activities, which are not obtained in college. Furthermore, this reflective method of learning has proven to be the most effective way of lasting student learning;

f. Legal clinic is aimed at strengthening civil society, taking care of the professional responsibilities of lawyers through the emphasis of legal aid needs to protect marginalized communities.

Clinical legal education provides the foundation for students in researching a professional career later that has a great commitment to ethics and values of social justice. In addition to students, clinical legal education provides necessary legal services to communities outside the law faculty, also involving law academics (faculty and students) into the world as actors not just observers.

In some countries in Africa and Latin America, legal offices in communities providing legal services are also called legal clinics. There is a wide variety of legal clinics available and / or run by law faculty. The type depends on many factors, both internal and external. Based on the location of the practice, there are two types of legal clinic that is in the law faculty (in-house clinic) and outside the law faculty (out-house clinic).
Programs from the out-house clinic consist;

a. Externship, i.e. a student working in a law office or government office under the supervision of a practicing lawyer or a government official;
b. Community clinic, where students work directly in the community;
c. Mobile clinic, students visit the community to give legal opinions and / or notify the community of their rights, or provide advice on certain types of legal issues and how to solve them.

Programs from in-house clinic consist of:

a. Life client / real client clinic, where students provide legal services directly to clients;
b. Simulation clinic, in which students simulate real life on the basis of role-playing in order to train students’ faculty skills. Usually real cases are used in this simulation clinic.
c. Street law clinic, which provides legal education and the rights of Primary School students (SMP) and Senior High School (SMA) and also marginal community. In addition to discussing the rights of citizenship, students can also discuss about basic legal understanding such as the sale and purchase of land, the writing of wills and others.

Of all its forms, the legal clinic will have; (1) a component to teach skills and values about social justice, (2) a component to apply those skills in a practical setting, (3) reflection and evaluation. In the simplest legal clinic program, students follow the clinic course by obtaining credit. The student accompanied his client in real time, at the same time he attended the legal clinic that parallels it with their field experience. The structure of field work is almost the same, and parallel seminars are also used in externship programs. Lecturers who work in the legal clinic conduct the student work with a limited number of cases, the important thing is to learn to service the community. lecturers who will supervise the activities of students, whether it is litigation activities or other types of legal services. So only through the planning and balance of all components that make the goal of clinical legal education will be achieved.

3. RESULTS AND DISCUSSION

3.1 History and Development of Innovation Clinical legal in Indonesia

The embryo of legal clinics already existed from 1970, it is seen from the many campus legal aid institutions that exist today, one of which is the Institute of Consultation and Legal Aid (LKBH). The characteristic of LKBH is to involve students in handling the legal issues facing clients, but not covered in the semester credit system (SKS) or the lecture unit (SAP) used in the program. This LKBH program, is growing after Indonesia has passed Law no. 16 of 2011 on Legal Aid (Banking Law) on 31 October 2011. Law This legal assistance becomes one of the implementation of the constitutional rights of every person to get equal treatment before the law, as well as form of state responsibility to provide legal assistance for the poor.

The entry of LKBH campus as a legal aid organization can not be separated from the provisions of articles 8 and 9 of the Law on Legal Assistance, stating that: The implementation of legal assistance is carried out by qualified legal aid providers and legal
aid providers are entitled to recruitment of advocates, paralegals, lecturers, and law faculty students. The above provisions of course states that lecturers and students of law faculty, as legal aid providers is a step forward and strengthen the importance of LKBH campus as one of the legal aid and one of the legal education media.

Faculty of law in Indonesia, actually has been providing legal assistance since the 1960s. Where the Faculty of Law University of Indonesia has established LKBH in 1963 as the implementation of Tri Darma Higher Education. Mochtar Kusumaatmaja has also organized a legal aid program through clinical legal education by establishing a law firm in Law Faculty of Padjadjaran University on February 18, 1969. Where the campus LKBH service not only provides legal advice but also represents and conducts legal defense for the poor in court.

In addition to the above models, there is a known legal training education (PKLH), where students in Indonesia are exposed to theories supported by practice, so that the practice of criminal law, civil law practice, state administrative law practice, diplomatic relations practice, religious court practice, the practice of drafting of trade contracts, and the drafting of legislation.

However, the current innovative Clinic is a different legal clinic with an internship program, where students draw practical abilities in institutions, offices or off-campus agencies with the goal of being skilled, but not getting the weight of value as a course, through legal clinical programs these students get grades from the legal clinic courses as well as having the ability to practice as well. This also differs from the law course of events or legal practice in which the students face more cases that are made with designed or completed cases to then be analyzed and prepared legal documents.

In this legal clinic, students must face real cases. Students meet dnean piahk who have cases, students prepare interviews, conduct interviews, prepare certain documents and so on. In addition to facing real legal cases, also accompanied by lecturers or parties who cooperate with the manager of legal clinics.

Until now the legal clinic program has been implemented in 5 universities in Indonesia, namely University of Indonesia, University of North Sumatra, Udayana University, Padjadjaran University and Hasanuddin University. The success of the management in these 5 universities because it has the power that is:

a. The faculty of law is located in the provincial capital and state status;
b. Human Resources (HR) is a competent lecturer with expertise each;
c. Has minimal facilities, namely the secretarial room and classroom teaching and learning
d. Alumni Network graduated from Faculty of Law who became Partner of legal clinic

3.2 The Development of Types of Clinical Legal Education in Indonesia

Until now there are 4 legal clinics that run, namely the Clinic of Criminal Law, Civil Law Clinic, Clinic Law of Women and Children and Anti-Corruption Clinic. The course of legal clinics for example in the Faculty of Law University of Indonesia is organized by the
Laboratory Unit, Legal Clinic and Student Competition Faculty of Law University of Indonesia. The recruitment of students of legal clinic courses is done at least 2 months before the beginning of the new semester. The recruitment consists of 3 stages, namely the administrative phase, the written test phase, and the interview stage. The growing legal clinic and its explanation as follows:

a. **Civil Law Clinic**  
Students in civil clinics are equipped with skills in handling cases in the field of civil law, both in the form of consultation and legal assistance. The main skills in this program are to train students' communication skills with clients, as well as to train students to work systematically on the cases they face. This clinic provides an opportunity for students to learn how to work an advocate in handling cases by accompanying advocates from a civil society organization (CSO), starting from preparing to follow the trial of the cases handled, and also communicating with various agencies government or certain institutions in connection with the handling of cases and participate actively in research and make documents related to cases handled. In order to provide students with the means to practice these skills, the Legal Clinic cooperates with CSOs in the area around the campus and Courts as well as the attorney's office.

b. **Criminal Law Clinic**  
Providing legal assistance in a criminal case is a skill taught at a criminal law clinic. This clinic becomes a means of applying science in the form of criminal law theories that have been obtained during the lecture. This clinic is based on the fact that civilians often do not get justice in the case of pidan. Even if a person is guilty of a wrongdoing, or a person is caught red-handed, he still has the rights of a suspect during the process leading to the commencement of proceedings. These rights are sometimes still underestimated by some law enforcement officers in Indonesia, so that the perpetrators of criminal acts do not treat fairly, as regulated in the applicable legal norms. By upholding the value of justice in the law for every citizen, the Criminal Clinic aims to raise public awareness and especially law enforcers in order to pay more attention to the basic principles and rights of suspects in processing a person involved in a criminal case. Through legal skills training for students attending the Criminal Law Clinic, students will exercise their sensitivity and care when accompanying a suspect of a crime, so that the rights of the suspect are not violated. Criminal Law Student Practice is organized and facilitated by Misalanya legal aid institution Jakarta Legal Aid Institute and LKBH Law Faculty of University as partner of Law Faculty of University of Indonesia.

c. **Women and children Clinic**  
Women and children are part of a society susceptible to harmony, further impacting on injustice against them. Not infrequently also women and children become victims of violence both by longkungan surrounding and by his own family. But because of the limitations they have on access to the law, it is ultimately difficult for them to defend their rights. Through a women's and children's legal clinic program, students will be trained to have the ability to approach approaches to victims or even abusers who are women and children. Students will be trained to help women and children by empowering them in solving the problems they face. Clinical legal that always carry the value of social justice
seeks to memebrikan legal services that are not only in the same direction but also empower the community so that the community can create a thigh and legal order. Students of legal clinics of women and children will not be trained to provide legal services in terms of consultation, legal assistance either litigation or non litigation, but also students will contribute in sharing legal knowledge to the community, especially women and children through legal counseling. Some legal counseling conducted by students of legal clinics of women and children, among others, the theme of raising awareness of children about the dangers of drugs, increased adolescent awareness about violence in dating or domestic violence, and others. Counseling has been mostly done in senior high schools and for the legal clinics women and children will continue to pursue approaches to communities to help raise awareness of laws and vigilance of women and children. As for the University of North Sumatra Main Partner is the Foundation Pusaka Indonesia which is the institution of protection and legal aid to children and women.

d. Anti-Corruption Clinic
Anti-corruption clinic is aimed at students who have interest in research in the field of eradication of corruption crime. In the program with the clinic partners, students are taught to have the ability to provide legal opinions, critical ways of thinking and sharpen the analytical skills in doing research on social phenomena and facts on the ground that occur within the context of eradicating corruption. Students will be trained to observe and scrutinize the criminal acts of corruption in the field and the effectiveness of legal norms that apply to combat corruption. Observations are mainly made on the law enforcers of both the Police Agency, the Attorney General's Office, the Corruption Eradication Commission, and the Indonesian judiciary bodies. With the participation of students through this clinic, it is hoped that the spirit of eradicating corruption in Indonesia will continue to be maintained and on the other hand can help educate the community to be more responsive to things or habits that can lead to corruption. In addition to the above 4 Clinics, there are several clinics that are also developing the environmental clinic and mediation and street law recently implemented at the University of Indonesia, the draft legislation drafting at the University of North Sumatra and Udayana. Consumer Protection Clinic at Hasanudin University. The opening of this clinic is based on community needs and the availability of human resources at the university.

3.3 Strengthening Education of legal clinics and creating professional graduates and law reformers in Indonesia
Based on research conducted by the National Law Commission, there are two mainstreams or opinion groups on the orientation of legal education (National Law Commission: 2004) First, the opinion which says that higher education law at the undergraduate level is academic education and not professional education. As an academic education, the focus of legal education is to seek and prepare graduates to master science, with an emphasis on theoretical and cognitive aspects. Second, the opinion that the higher education law strata 1 even though it is academic education, but the curriculum also contains courses that train aspects of legal proficiency to learners. This opinion is in line with the normative stipulations set forth in the Decree of the Minister of Education and Culture (Kepmendikbud) No.0325 / U / 1994. In this decree, it is mentioned that the purpose of higher education of law university degree program is to
prepare students to become law graduates who memuliki criteria as follows:

a. Master the laws of Indonesia.

b. Mastering the scientific foundations and foundations of work skills to develop the science of law

c. Mastering and sensitive to issues of justice and social issues

d. Able to analyze legal issues in society

e. Be able to use the law as a means to solve societal problems wisely and still be based on legal principles.

However, according to the author, in addition to the above it is necessary to plant the main paradigm of social justice as a perspective in higher education law. This, of course, will bring benefits not only to colleges and university students, but also to those who are users of higher education law.

This is supported by, The Ford Foundation's research found that legal clinic activities, which are the implementation of social justice in higher education law, have a positive impact on equitable and sustainable development Similarly to human rights, the participation of developing countries (Stephen Golub et all, 2003).

This means that the perspective of social justice is needed in legal education, especially in relation to the third element of Tri Dharma Perguruan Tinggi, ie community service.

Finally. Clinical Legal Education (CLE) is one of the ways in which social justice can effectively be applied to higher education law. CLE itself is a learning process where students of law faculty are given practical knowledge, justice and values to provide legal services to the community and on the basis of social justice values using interactive teaching methods and reflective. (Rostas, 2005)

Practical Knowledge deals with students' practical knowledge of law (in a broad sense) and social reality in society, skills related to student skills such as reading skill, litigation & non-litigation skills. While values relate to the responsibilities of law enforcement professionals and the principles of social justice in which the student must also understand the social realities that exist in society. Keywords for values in the social justice platform are alignments to the vulnerable groups / the last well-off / disadvantaged groups. The supporting component of CLE is a legal clinic which is conducted by students with supervision from senior lecturers who have experience in litigation and non-litigation practice in every campus in Indonesia. The most important activity of the legal clinic is the provision of legal aid and legal education for the least well-off.

Thus, it is true that the aspiration of Mochtar Kusuma Atmadja, as the father of law education reform in Indonesia by saying that legal education as part of the national legal education system has the function to equip and prepare students with knowledge and sufficient legal skills, in order to pro sufficient knowledge and legal skills, to be professionally able to formulate and solve the various cases and legal problems that arise in the daily life of society. As one of the legal institutions of the national legal system, legal education also assumes the function of strengthening, improving, and developing the national legal system itself through graduates resulting in a legal reformer and not a lawyer who is less sensitive to the values of justice. With this program is expected law scholars are not only required to apply the science of law that has been studied, but also dituntuk to find the law (rechsvinding / judgemade law) for the national interest.

In his journey, the main problem faced by legal clinic program in campus in Indonesia, that is
a. Limited time in teaching clinical programs from students, lecturers and clinic partners;
b. Institutional Management;
c. Low appreciation of students or lecturers involved in Clinical Legal of Campus;
d. Lack of funding sources; and it takes the campus leadership to make the program more advanced

The above should also get attention for the sustainability and strengthening of clinical programs in addition to the main one is to instill social justice as a clinical legal education paradigm so as to produce professional graduates and become law reformers in Indonesia.

4. CONCLUSION

Clinical legal education is a learning process where students of law faculty are given practical knowledge, justice and values to provide legal services to the community and on the basis of social justice values. The perspective of social justice is closely related to the third element of Tri Dharma Perguruan Tinggi, ie community service.

Clinical Legal Education is defined in different ways throughout the country, and Clinical legal education in Indonesia is known since 1970 when the minister of education and culture issued a decree No. 0198/1972 which introduced the clinical legal courses and established legal aid institute (LBH) in some law faculties and also known as Legal Proficiency Training (PKLH) students also practice but unfortunately the clinic program does not have the weight of course or practice values. This is in contrast to the legal clinics that are applied in 5 pilot University of Indonesia university, universias udayana, university alignment, north sumatera university and hasanuddin university by combining the weight of subject and practice. As for the development there are some clinics that can be taken by the students are civil clinic, criminal clinic, anti-corruption clinic and clinic of woman and child and other clinical innovation according to capacity and requirement of society around campus.

The social justice paradigm is a way of strengthening the legal clinic program, as well as addressing the issues related to time limitations of clinical programs, support of faculty and university leaders to funding. In addition, this legal clinic program must be replicated to law faculties in universities in Indonesia so that more and more produces graduates of law professional law and also become law reformer in Indonesia.

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ECONOMIC SECURITY FOR ELDERLY FROM ISLAMIC PERSPECTIVE

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ABSTRACT

The elderly proportion of the global population is increasing annually. The world’s population aged 60 years is expected to increase from 12.3\% in 2015 to 21.5\% in 2050. Many see the increase as a phenomenon of the 21\textsuperscript{st} century, due to the impact of technological advances in medical science, decreased mortality, and declining fertility. Increasing age results in physical and psychological changes. The elderly are at risk of developing chronic diseases, and have limited ability to work to earn money. Life at this age can be challenging, especially from an economic standpoint. Economic security refers to a sense of safety and security derived from a solid income or other resources to support present and future needs. People need food, clothing, shelter, and good health to survive. In Islam, this is a basic requirement (daruriyyah) for human life. Inadequate economic security contribute to increased poverty and affect the quality of life, contrary to the objectives of Islamic law, which seek to preserve its five major interests: religion, life, property, lineage, and intellect. As a holistic religion, Islam does not ignore economic security and its role in preserving human life, including for the elderly. This paper discusses forms of economic security for the elderly that ensure achievement of the objectives of Islamic law. Islam provides the compulsory and voluntary economic security mechanism for the elderly.

Keywords: Ageing; Economic security; Elderly; Islam; Inheritance; Maintenance; Population; Senior citizen; Waqf; Wasiah; Zakah.

INTRODUCTION

The global proportion of the elderly population is increasing annually. The world’s population aged 60 years is expected to increase from 12.3\% in 2015 to 21.5\% in 2050. Many attribute the increase as a phenomenon of the 21\textsuperscript{st} century due to the impact of
technological advances in medical science, decreased mortality and declining fertility. Malaysia is no exception. Based on the projections of the United Nations (UN), Malaysia will reach an ageing nation status in 2035 when its population aged 60 years and above is expected to reach 15% of the total population (Department of Statistic Malaysia DOSM, n.d).

Ageing affects the elderly in many ways, prominent among which is from an economic standpoint. Longer life expectancy means that the elderly are required to spend more, especially on health and daily necessities. Many senior citizens lose their main source of income after retirement and, therefore, need other resources to satisfy their economic needs.

Changes in demographic trends can have a major impact on a country. An increasing elderly population can place additional strains on the labour force so that they may care for senior citizens and also fill the void in the economy left due to their retirement. At the same time, family structures will also change due to the forced migration of children to find jobs. Changes in family structure will reduce the dependence of senior citizens on their children while also having an economic impact on the elderly (Sayed Mahadi, 2009).

To deal with the economic problems of the elderly, the International Labour Organisation (ILO) has been strengthening social protection systems as economic security for the elderly. Social protection focusing on pensions and health services is a key requirement for senior citizens (ILO, 2014). The goal of social protection is to reduce the stress faced by the poor and those at risk of losing revenue (P. Mathiu & Kangai, 2012).

Rejda (1999) defines the term economic security as a sense of feeling safe and protected by having a solid income or other resources to support the basic needs of life in the present and the future. Basic requirements refer to a person’s need for food, clothing, shelter, healthcare, and other necessities. Revenue is the primary means of securing those needs. However, Rejda (1999) placed conditions on earnings that serve as economic security. First, there is a guarantee that one can earn money continuously. Second, the income must be above the poverty line or living wage. Third, the economic security is related to current changes, so when the cost of living or expenses increase, more revenue is needed to cover the costs.

Masud, Haron, and Gikonyo (2012) support Rejda’s (1999) categorization of income as a source of economic security. Income can come from salaries, wages, and contributions. According to Masud (2008), income is not the only source of economic security. Other sources of assets also act as a form of economic security. (Masud 2008)

Ortiz (2014) explains the link between economic security and social protection. In general, social protection is a form of economic security for individuals to obtain basic needs related to health, education, and housing. According to Lee (1998, pp. 291-307) and Vijay Kumar (2003, pp. 45-65), the forms of social protection include financial support from family and society. Through this system, each family member is responsible for protecting family members by providing maintenance, shelter, and supports for physical and emotional health.

According to Handayani and Babajanian (2012), the pension scheme and health services introduced in social protection has reduced poverty among the elderly and helps safeguard the socio-economic position of the elderly. However, the retirement scheme provided still has drawbacks because senior citizens who work in the formal sector are the only beneficiaries (Evans and Hackness, 2008). This means that many senior citizens still suffer from poverty. This fact was confirmed by the data obtained by Masud and Haron (2014), which showed that based on revenue size, 70% of seniors were below the poverty line. Yeung and Xu (2012) found that economic pressures faced can have an adverse impact on quality of life and lead to death.

In Islam, poverty is seen as a problem harmful to individuals, families, and the society (al-Qaradawi, 1977). As a holistic religion, Islam does not ignore aspects of economic security, including of the elderly. Economic security is also one of the actions to achieve the objectives of the Islamic Law that stresses the fundamental importance of care five (al-daruriyyat al-khams) of religion, life, property, lineage and intellect.

This paper discusses the position of the elderly in Islam, the Islamic concept of economic security and economic security mechanisms of seniors according to Islam.

2. METHODS

In a study on the mechanism of economic protection of elderly, the researcher employed document analysis method. In this paper, the researcher dealt with the books, journals, program proposals, organisational and institutional reports and newspapers (clippings/articles). These data were analyzed with the aim of retrieving key information about the Islamic concept of economic security and economic security mechanisms of seniors according to Islam. The details about the economic security mechanism were extracted from the available documents.

3. RESULTS AND DISCUSSION

3.1. THE ELDERLY IN ISLAM

The elderly are referred to as al-Musin in Arabic (Ibn Manzur, 1990) or as advanced in age (al-Sheikh, al-Ajuz) and extremely old (al-harim). These terms have different meanings corresponding to the changes that occur in the elderly. According to Ibn Manzur (1990), sheikh refers to the early age of the elderly, when grey appears in their hair. The term for “extremely old” (harim) means the last age for senior citizens, while “advanced in age” (al-Ajuz) refers to those who are weak in terms of physical and mental strength.

In developed countries, “the elderly” refers to people who have reached the age of 65 years and above (World Health Organisation). In Malaysia, the elderly are defined as people aged 60 years and above. (Zawawi, 2013)

According to Al-Shaukani (1997), the weakest situation for seniors is the last stage of old age (arzalil umr). People at this stage are similar to children, characterised by poor intellect and failing memories. The last stage of old age (arzalil umr) does not set in at a certain age, because every change with age is unique for each person. Nevertheless, Ibn Yusuf (2002)
says this phase usually occurs in people over the age of 75 years.

The Prophet (PBUH) loved the elderly and taught his followers to maintain good relationships with them. A hadith narrated by Al-Tirmidhi (1994)

*Anas bin Malik reported, An older man came to talk to the Prophet (PBUH), and the people were hesitant to make room for him. The Prophet said: “He is not one of us who does not have mercy on our young and does not respect our elders.”* (Jami’e Al-Tirmidhi, vol. 4, hadith 1920)

This hadith shows the etiquettes taught by the Prophet in treating the elderly. Islam’s emphasis on the elderly not only concentrates on doing good order, but also a warning from the Prophet (PBUH) to those who disrespect the elderly will be denied admission to paradise. (Al-Mubarakfuri, 2010).

Those whom Allah instructs must be honoured even more when they have aged, the parents. Allah says in al-Isra’:

_Thy Lord hath decreed, that ye worship none save Him, and (that ye show) kindness to parents. If one of them or both of them attain old age with thee, say not "Fie" unto them nor repulse them, but speak unto them a gracious word._ In Quran 17:23 (Translated by Pickthall).

Al-Qurtubi (2010) explains that, parents occupy an honourable position, and children have an obligation to be kind to parents, such that if one fails to do so, they are failing to honour Allah. This kindness to parents takes on a new meaning once they have grown old, because in this phase, they become weak and sickly. Everyone should address parents in kind and gentle terms, meet their needs, and pray for them. In the event that parents are of a religion other than Islam, Muslims must continue to remain in close contact and ensure that their needs are met.

The elderly have a special position in Islam. When the elderly suffer physical changes that weaken their ability to care for themselves, and experience deteriorating health, they can have difficulty finding income to meet their daily needs and health expenses. Thus, a mechanism should be in place to ensure that elderly get their proper rights, and that the objectives of the Islamic law to protect their welfare are achieved.

### 3.2. MECHANISM FOR ECONOMIC SECURITY OF THE ELDERLY IN ISLAM

The discussion of economic security is by no means new in Islam. It was established through social security (*takaful ijtima’i*) (Abu Zuhrah, 1991). Social security (*takaful ijtima’i*) means that every member of the community works together individually, in groups, or through organisations, to guarantee the well-being of society, such as by helping the poor and orphans. An important elements form the basis of social security in Islam: *takaful* and *inafaq*.

*Takaful* has a broad sense of cooperation that includes individuals, families, communities, and countries. It helps promote private and public morals, maintain family ties, and meet the needs of national economic development (Ulwan, 1983). Islam encourages its followers to work together and help each other in matters of virtue, and to help prohibit one another from disobedience. Allah
And the believers, men and women, are protecting friends one of another; they enjoin the right and forbid the wrong, and they establish worship and they pay the poor-due, and they obey Allah and His messenger. As for these, Allah will have mercy on them. Lo! Allah is Mighty, Wise. In Quran 9:71, (Translated by Pickthall)

According to Al-Razi (1981), this verse describes the necessary goodness within every believer, male or female. In addition to obeying Allah and His Messenger, they are instructed to help each other as brotherhood and believers who give alms. Every Muslim must help each other in goodness because of the strong bonds of brotherhood between them, like interlocking fingers (Ibn Kathir, 2009). In another hadith, the Prophet (PBUH) describes Muslim brotherhood as like mutually reinforcing parts in a building. This is explained in a narration by al-Bukhari (2003) from Abu Musa:

The prophet (PBUH) said, “Verily, the believers are like a structure, each one strengthening the other” and the Prophet clasped his fingers together (Sahih Al-Bukhari, vol.1, hadith 467)

This hadith teaches that every Muslim brother is a part of all others. As a reaction to this impulse, every individual Muslim will share the pleasure of other Muslims, and help end the suffering endured by others (Al-Zuhaili, 1989).

Infaq means spending part of one’s money or property for the assistance of others (Ibn Manzur, 1990), and should benefit humanity. Infaq also expands the distribution of wealth so that all members of society can enjoy it. (Ulwan, 1983)

Infaq is either compulsory or voluntary. Compulsory infaq is a duty on Muslims to give of their property according to the rules and rate determined by Islamic law. Compulsory infaq includes maintenance and inheritance, as well as zakah (Al-Zuhaili, 1989).

Unlike obligatory infaq, which is fixed by Islamic law, voluntary infaq is giving of one’s wealth for the benefit of another, with the intention to please Allah. The individual determines the size and form. Among the categories of voluntary infaq are endowments, wills, and gift (hiba) (Ulwan, 1983).

Muslims are encouraged not to be miserly, and to give to individuals, society, and the state. Allah says,

Who hoard their wealth and enjoin avarice on others, and hide that which Allah hath bestowed upon them of His bounty. For disbelievers We prepare a shameful doom. In Quran 4:37 (Translated by Pickthall)

According to Ibn Kathir (2009), this verse illustrates how Allah chastises those who fail to infaq to parents, relatives, orphans, the poor, neighbours, and wayfarers.

Islam also emphasises sharing the wealth. This is because in Islam wealth does not belong to human beings in an absolute sense. Human beings are trustees of the property and should spend it responsibly (Ulwan, 1983). For this reason, Muslims are ordered to allocate a portion of their property to infaq. Coinciding with the objectives of the Islamic law that seeks the good and rejects harm, infaq is a way of sharing the wealth with those in need.

Islam provides various forms of social security that become a form of economic security for senior citizens, either through family or society. (Ulwan, 1983)

1-Zakah

Zakah means a payment made by an individual, rather than a percentage of earned wealth
to the deserving beneficiaries (Al-Zuhaili, 1989). Zakah is obligatory for every Muslim who meets certain conditions.

The collected zakah is divided among the needy, or delivered to recipients of zakah. Those entitled to receive zakah (recipients) are described in Surah al-Taubah:

The alms are only for the poor and the needy, and those who collect them, and those whose hearts are to be reconciled, and to free the captives and the debtors, and for the cause of Allah, and (for) the wayfarer; a duty imposed by Allah. Allah is Knower, Wise. In Quran 9:60, (Translated by Pickthall)

Elderly people are not specifically mentioned as recipients of zakah in the Quran. However, seniors who are in the category of recipients, whether poor or debtors (al-gharimin), are entitled to receive zakah.

Zakah is of two types: zakah fitrah and zakah on wealth. zakah fitrah is paid annually, while zakah on wealth is paid once the minimum measure of wealth has been under one’s ownership for a complete year (Al-Zuhaili, 1986). It means that zakah is an annual occurrence to help the poor and needy, and to contribute to economic security. Zakah is not only an act of obeying Allah; it is also a sense of individual responsibility to share the wealth with the poor and needy (Abu Hussin, Mohamad, & Ab Rahman, 2014). Sharing wealth is a form of economic security for those in need to ensure their basic needs are met.

2- Maintenance

Social security in Islam also emphasises cooperation to meet the needs of the family. In Islam, kin are given special privileges when they reach old age. Parents receive such special privileges. Among the rights they are granted is maintenance. Among the reasons that require a person to give maintenance to another person are blood ties (al-qarabah) and marriage. Maintenance of the parents is included in the category of blood ties (al-qarabah) (Zaidan, 1993).

Maintenance obligations to parents are described in al-Isra’:

Thy Lord hath decreed, that ye worship none save Him, and (that ye show) kindness to parents. If one of them or both of them attain old age with thee, say not "Fie" unto them nor repulse them, but speak unto them a gracious word. In Quran 17:23. (Translated by Pickthall)

According to al-Qurtubi (2010), this verse is a commandment to children to love and do good for parents. Included in this command is the duty of maintenance and providing them funds when needed.

The obligation of maintenance to parents is not limited or restricted by similarity in religious affiliation. The responsibility of the children to provide maintenance to their parents is based on love and an appreciation of the sacrifices that parents make when raising them (Ghanim, 2013). Scholars also agree that giving parents pocket money is the responsibility of children, whether male or female (Zaidan, 1993). It is the duty of children to ensure that their parents’ needs and expenses are met (Al-Zuhaili, 1989). Ignoring the maintenance of the parents is an act of disobedience in Islam. The act of disobedience to parents is a grave sin.
Observing proper maintenance could reduce the incidence of poverty among the elderly. According to Mohd (2014), the incidence of poverty is reduced if the elderly are living with children, because economic needs are shared. Even if there has been a change such that children no longer live with their parents, maintenance is to be met by providing money for monthly expenses, providing groceries, or paying the wages of domestic helpers for parents.

3 - Inheritance

Islam also provides for economic security to parents and other relatives upon death in the form of inheritance. Inheritance applies to what is left by the deceased in consideration of the rights of the heirs, divided based on shares and beneficiaries identified in Islamic law (Zaidan, 1993).

These divisions are described in the Quran and hadith. Among the Quranic verses which describe the distribution of wealth in Surah al-Nisa’:

Allah chargeth you concerning (the provision for) your children: to the male the equivalent of the portion of two females, and if there be women more than two, then theirs is two-thirds of the inheritance, and if there be one (only) then the half. In Quran 4:11(Translated by Pickthall)

From the above verse Allah has clearly identified the rates and beneficiaries who are entitled to receive the assets of the deceased. This division has been established to facilitate the distribution of the estate of the deceased equitably (Al-Sabuni, 2001).

Islam has allocated divisions of property based on a number of rationales, such as blood ties and marriage. The parents belong to the category of relatives who receive a share of the inheritance (Zaidan, 1993)

This shows that Islam has a system for managing the assets of the deceased and fairly granting the rights of all groups—men, women, father, mother, and other relatives. According to Masud, et al. (2012), the economic position of elderly men is stronger than that of elderly women. This is because men have greater employment opportunities in the formal sector than women, who are more involved in informal employment. If a child dies, the inheritance acts as special economic security for parents and senior citizens.

4 – Endowments

Endowment (Waqf) refers to the property of the person who donated his possession in virtue for the public to benefit from its usufruct (Al-Zuhaili, 1989).

Endowments are created as charity solely to reap rewards from Allah. The practice of dedicating property in propriety will be rewarded by Allah, and is a perpetual benefit to society (Al-Zuhaili, 1989).

From the point of view of recipients, there are no limits on who can receive the benefits of endowments (waqf), as long as the recipient conforms to the conditions prescribed in Islam. Endowments can be made in various forms, whether in cash, land, or infrastructure facilities such as hospitals, homes, community centres, vehicles, and medical equipment. (Rifin, Mujani, & Arshad, 2014)

For example, a building could be donated for citizens who do not have family members or
are less fortunate, protecting their lives by providing for the needs of the senior citizen. In addition, vehicles could be endowed for the welfare of senior citizens to facilitate getting the elderly to a clinic or hospital for treatment. Health equipment, such as dialysis machines and wheelchairs, could also be endowed to ease the burden on the elderly, who are prone to disease and do not have sufficient funds for treatment and health facilities.

The benefits of endowments (waqf) are not limited to Muslims, and can be used by non-Muslims. Hiba can be given to anyone. However, Islam encourages giving to family members.

Donated property can bring substantial benefits to the elderly in need, including non-Muslims.

5- Gift (Hiba)

Islam also encourages giving to the families and those in need voluntarily, without seeking any return. Gifts (hiba) are encouraged in Islam, as they help create feelings of love between the giver and the receiver (Al-Zuhaili, 1989).

Hibah means giving one's wealth to others without the expectation of any replacement or exchange with the transferring effect on the ownership. The rule is that the return of gifts, once given, cannot be sought. Hibah is the transfer of wealth from the giver to the recipient during his lifetime

Hiba can be given to anyone, muslim or non muslim. However, Islam encourages giving to family members first then nearest among the neighbors and so forth. This does not means one cannot give a gift to those who are not near and not close to him. One of the reasons to do so is that it will help enhancing the love and special relationship among the members of the family and neighbors, who are in the surroundings.

6- Will

A will is a pledge a person makes on his property or welfare benefits for the stipulated purpose, which takes effect on his death and will be executed after his death (Zaidan, 1993).

This is mentioned by Allah:

*It is prescribed for you, when death approacheth one of you, if he leave wealth, that he bequeath unto parents and near relatives in kindness. (This is) a duty for all those who ward off (evil).* In Quran 1:180 (Translated by Pickthall)

This verse reflects the duty to provide for parents and relatives (Ibn Kathir, 2009). At the beginning of Islam, the will required that the entire property be given to both parents and kindred. This is because during pagan Arab practice, people would give to others out of a sense of pride, while leaving their relatives in poverty and hardship (Al-Zuhaili, 1989). However, this was later abrogated to include a broader range of beneficiaries, as narrated from Abu Umamah Al-Bahili that he heard the Prophet say in his sermon: (Ibn Majah, hadith no 2817, vol. 3

*Allah has determined the rights of each heir, then there is no further right of bequest for an heir.* (Sunan Ibn Majah, vol.3, hadith 2817)
With regard to the portion of wealth that can be given as a will, Islamic law sets that it should not exceed one-third of the estate (Zaidan, 1993). The will is limited to one-third, based on the famous event of Sa’ad bin Abi Waqas, when the Prophet was asked about the proper quantity of the inheritance bequeathed. The Prophet (PBUH) explained that the sufficient property bequeathed to him was a third: (Al-Bukhari, 2003)

“One-third and one-third is a lot”. (Sahih Al-Bukhari, vol.4, hadith 2742)

In some circumstances, the wishes and needs of one’s next of kin differ due to differences in economic and social status. For example, a hereditary illness that increases with age leads to greater health problems, requiring more help than a healthy relative would need. In this case, the needy heirs who receive inheritance may still receive a will if the other beneficiaries agrees, as long as it does not exceed one-third of the estate (Al-Zuhaili, 1989).

As maintenance is not limited or restricted by religious affiliation, a person can bequeath property to family members of different religions, especially to parents (Al-Zuhaili, 1989)

The wealth designated by a will can be in the form of money or property, such as houses, vehicles, savings, and business benefits. It can also be given to charitable organisations in such forms as bequeathing the house as a place of refuge, or bequeathing land for the construction of homes or vehicles that can be used by elderly nursing-home.

4. **CONCLUSION**

The discussion above shows that economic security is crucial and a basic need for each individual. Inadequate economic security causes a person to live in poverty. Poverty is not only detrimental to individual institutions, but also affects families, communities, and countries. As a holistic religion, Islam is concerned with the problem of poverty, as it is contrary to the objectives of Islamic law, which seek the good and reject harm to mankind.

Thus, concerning the economic resources of the elderly, Islam provides economic security as a solution and its mechanism. Economic security mechanisms in Islam are based on the concept of social security (takaful ijtima’i). This concept emphasises collaboration among individuals, families, and communities, to spend (in charity) property for the economic security to those in need, including the elderly.

Economic security in Islam is a clear and fair system. The economic security provided is not limited to a single mechanism. According to Islam, there are two types of Islamic economic security mechanisms: voluntary, which includes gift (hiba), wills (wasiah) and endowments (waqf); and compulsory, which includes maintenance, zakah, and inheritance.

These mechanisms provide economic security in the form of finances, food, and infrastructure facilities such as shelters, hospitals, and vehicles. The financial resources help seniors get food, drink, clothes, and healthcare. The diverse security mechanisms in Islam reflect the seriousness it attaches to helping the needy, such as senior citizens, helping to remove difficulties while helping them live a better life.

5. **ACKNOWLEDGEMENT**

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6. REFERENCES


Abstract: The case of Mary Jane Veloso who was sentenced to death in Indonesia for having allegedly attempted to smuggle in 2.6 kilos of heroin created a massive international outpouring of support. On the eve of her execution on 28 April 2015, the hashtags #SaveMaryJane and #BiarkanHidup, posted by increasingly frantic netizens, became the top trending topics on Twitter. This paper discusses materials such as Mary Jane Veloso’s letters to Indonesian President Joko Widodo and Philippine Vice President Jejomar Binay, the hundreds of tweets generated with the hashtag #BiarkanHidup and the statements of various individuals and organizations in Indonesian media which refer to her case. This will be followed by some reflections on the possibly changing nature of human rights in the era of intensifying labor migration.

Key words: Labour Migration, Social Media Campaign, Mary Jane Veloso, Human Rights

1. Introduction

A well-publicized photograph of Mary Jane Fiesta Veloso shows her wearing traditional Indonesian attire while celebrating Kartini Day (21 April 2015) with her co-inmates in Lapas Wirogunan, Yogyakarta. It was exactly her fifth year in prison after having been arrested at the Adi Sutjipto Airport at Yogyakarta for being in possession of 2.6 kilos of heroin concealed in the lining of her suitcase (GMA News Online 22/04/2016). Although there were strong indications that she was a victim of human trafficking by an international drug syndicate, she was nevertheless meted out the death penalty by the Indonesian court. She was also tried without the benefit of a Tagalog interpreter and could not therefore adequately understand the legal proceedings. Nuraini, the interpreter assigned to her who could only translate from Indonesian to English noted that her ability in the latter language was very limited, the same level as Indonesians in general. Nuraini related sadly, that on her last visit to look into Mary Jane in prison, the latter said, “Saya cantik, saya baik” (I am beautiful, I am good) (CNN Indonesia 28/04/2015). Behind Mary Jane in the picture is an image of Raden Adjeng Kartini (1879-1904) with the quote “Semangat Kartini Semangat Perempuan Untuk Menatap Masa Depan” (The spiritedness of Kartini, the spiritedness of women to look towards the future) (Cf. Figure 1). Kartini became a symbol and inspiration for women’s rights in Indonesia mainly because of the
publication of a collection of her letters *Door Duisternis tot Licht* (Through Darkness towards the Light) which was first published in 1911.

It is not known if Mary Jane Veloso, 31, was inspired by Kartini’s example but she also wrote several letters from her prison cell days before the original schedule of her execution. She wrote letters to the youth of the Philippines (*kababayang kabataan*) advising them to stay away from drugs, to women (*kababayang babae*) warning them of illegal recruiters and the dangers of working overseas, and even to those who had deceived and victimized her (* mga taong nagpahamak nang aking buhay*) (CNN Philippines 27/04/2015; Inquirer.net 25/04/2015). Her two letters addressed to Indonesian President Joko Widodo and to former Philippine Vice President Jejomar Binay make for an interesting comparison.

Her letter to Jokowi was handwritten in Bahasa Indonesia. She addressed him as “Bapak President Joko Widodo” (Cf. Figure 2 and Table 1) and begins with her urgent request for clemency. She wrote that she is convinced that Jokowi has a “compassionate heart” (*hati nurani*) and is “very wise” (*sangat bijaksana*) so that he will make a “humane” (*manusiawi*) decision. She mentioned her two small children need the love and care of a mother who loves them. As a father himself to his children (*sebagai ayah anak Bapak*), she knows that Jokowi would understand how “very painful” (*sangat menyakitkan*) it would feel if his children were also in the position (*ada di posisi*) of being denied their right (*hak anak-anak*) to be with their mother. Veloso then shifts the discourse about the father and his children from a personal level to a national one. She wrote:


(Honourable Sir, I believe that as the Father of the Indonesian Nation, you are obliged to protect your children, above all those who are truly innocent.)

Veloso used the word “Bapak” three times in the sentence above. The first usage is close to the English word “Sir” so that “Bapak yang Mulia” could be translated as “Honourable Sir.” The second refers to Jokowi as the “Bapak Negara Indonesia” so that he becomes the “Father of the Indonesian Nation.” The third refers to him as a “father” who must protect his “children” (*anak-anak*), which refers to all the children of the Indonesian Nation, or its people. Veloso therefore claims her place as a child of the Indonesian nation. She ends her letter formulaically but sincerely by wishing “God’s Blessings” on President Joko Widodo and his whole family (*Tuhan selalu Memberkati Bapak President Joko Widodo dan seluruh keluarga Bapak*) which reiterates the theme of Jokowi being the father (*ayah* or Bapak) of a family (*keluarga*). All these usages of “Bapak” and the single usage of “Ayah” fuse into a single image the abstract and the experiential (or affective) dimensions of “Fatherhood” to which her claim of being a child (*anak*) or daughter of the nation is counterpoised.

On the other hand, her letter to Vice President of the Philippines Binay, starts off quickly with her request to be saved from the death penalty and appeals to his compassion by mentioning her two young children who need the love and guidance of their mother (Cf. Table 2 and Table 3). The relevant sentence written for Binay mirrors the one in the letter to Jokowi.
The same translational mirroring can be observed in the sentence about the relationship between the “Father of a Nation” and his metaphorical children (Cf. Table 4).

If Vice President Binay was the “second Father of the Nation,” she refers in the same letter to former Philippine President Benigno Aquino Jr. as the “Father of our nation” (ama nang ating bansa). In this letter, she also claims to be a child or daughter of the “Fathers” of the Philippine nation who must be protected. There is a kind of slippage however, when she calls Binay, “Second father of our nation” (Pangalawang ama ng aming bansa) and Aquino, more correctly as, “father of our nation” (ama ng ating bansa). The distinction between “aming bansa” and “ating bansa” cannot be captured in English but the possessive pronoun “amin” (our), excludes from the sense of ownership the person being addressed or the person reading the letter. “Ating bansa,” on the other hand, includes the addressee in the sense of ownership or belongingness to the nation. It is likely that this use of “amin” does not intend to exclude Vice President Binay from the nation, which would be absurd, but probably indicates that the addressee of the letter is double, it is addressed both to Binay (her fellow Filipino) and to others who are “not Filipinos.” In fact, at the end of her letter, she takes the opportunity to thank everyone who tried to help save her which include her fellow Filipinos, the Philippine Embassy in Jakarta and the lawyers handling her case. She thanks everyone, even those who are non-Filipinos (kahit hindi sila Pilipina), who are always ready to help her. Veloso also refers to the Philippine Embassy using a mixed Indonesian formulation, “Embassy Filipina, Embassy di Jakarta” (Philippine Embassy in Jakarta). And a sign of code-shifting occurs when she calls her countrymen “Pilipina” or “Filipina” which is not gendered in Indonesian, as it is in Tagalog, but refers to “Filipinos” as a whole.

In the letters to Binay and Jokowi, Veloso virtually claims to be the child of both the Philippines and Indonesia who is therefore entitled to the protection and safety which are “rights of the children” (hak anak-anak) of these nations. One feels less the tone of opportunism in this dual claim rather than that of an absolute submission to powers, to the Bapak and the Ama, which have control over life and death. She has become a child of Indonesia not because of birth but rather because she has been reduced to an absolutely vulnerable state pleading for her life. At the limit situation on the incoherent threshold of death, Veloso’s concept of rights is reduced to the most basic one of the right of a child to be cared for and protected by her parents, in this case, the two fathers (Bapak and Ama).

2. Hashtags #SaveMaryJane and #BiarkanHidup

On the night of 28 April 2015, the denizens of social media could not sleep. The hashtags #SaveMaryJane and #BiarkanHidup (Let Live) became the top trending topics on Twitter in Indonesia and the Philippines. In Indonesia #BiarkanHidup was at the top from 1:00 to 4:00 am on 29 April 2015 with a total of 546 tweets. In the Philippines, #SaveMaryJane trended with 852 tweets on 28 April 2015 and 72 tweets on 29 April 2015. On 11 September 2016, #SaveMaryJane would trend again because of President Jokowi’s statement that Philippine President Rodrigo Duterte had told him to “go ahead if indeed you want to execute her”
Among those who expressed support for Mary Jane by tweeting using the hashtag #BiarkanHidup on the night of 29 April 2015 were Anis Hidayah (Executive Director of the NGO Migrant Care), Erwiana Sulistyaningsih (a former migrant worker who was listed by TIME magazine in 2014 as one of the “most influential people” in the world) and the well-known Indonesian writer Djenar Maesa Ayu. Some of the most used hashtags co-occurring with #BiarkanHidup were #MaryJane (86 times), #SaveMaryJaneVeloso (51 times) and #SaveMaryJane (22 times). The most frequent themes among the #BiarkanHidup tweets were “fair trial” (93 times), “tidak/tak lemah” (not weak) (53 times), “not weak” (in English) (76 times), “innocent” (in English) (17 times), “tidak/tak/tdk/gk bersalah” (not guilty) (8 times) “korban/human trafficking” (victim of human trafficking) (17 times). The popular theme of “not being weak” reassures President Jokowi and Attorney General Prasetyo that it is not a sign of weakness if they let Mary Jane live. There are repeating versions of this appeal in English, Bahasa Indonesia and French (Marvin De Leon @mrmrervas: “HM Prasetyo, you are not weak if you let someone who didn’t get a fair trial, live. Cancel the execution of MaryJane. #BiarkanHidup”; anis hidayah @anishidayah: “Pak @jokowi, pak prasetyo, anda tidak lemah jika ijinkan seseorang manusia untuk hidup. Batalkan eksekusi Mary Jane #BiarkanHidup”; KP4 @AxelBrtc: “Vous n’êtes pas faible si vous laissez vivre quelqu’un n’ayant pas de procès JUSTE. Annulez exécution de Mary Jane #BiarkanHidup”).

Although the great majority of tweets with the hashtag #BiarkanHidup were unambiguously supportive of Mary Jane’s plea for clemency, there were also some tweets which expressed disbelief at the extent of support Indonesians were giving to Mary Jane when their own compatriots were suffering the same fate and were being ignored. Sang @Nambelass wrote, “Mary Jane is more popular compared to Siti Zaenab #BiarkanHidup” (Mary Jane lebih populer dibandingkan Siti Zaenab #BiarkanHidup). Siti Zaenab was an Indonesian migrant worker (Tenaga Kerja Indonesia (TKI)) who had worked in Saudi Arabia and executed on 14 April 2015 just a few weeks before Mary Jane’s own scheduled execution (CNN Indonesia 15/04/2015). Irfan ade julio @Irfanjulio observed, “When Mary Jane is to be executed the hashtag #BiarkanHidup is tweeted. When some Indonesian migrant workers are executed they are just ignored *sigh*” (Mary Jane di eksukusi mati berkicaulah hasteg #BiarkanHidup . Ketika beberapa TKI di eksekusi mati pada cuek bebek aja tuh. *sigh*). The news of Veloso’s reprieve further intensified the feeling of injustice. linglung @lulunghaji was sarcastic, “What esoteric knowledge does Mary Jane have @jokowi_do2 so that her execution was postponed, when Indonesian migrant workers are beheaded no one cares #BiarkanHidup” (Mary jane punya ilmu apa @jokowi_do2 sampai di tunda eksekusinya sedangkan para TKI indonesia di pancung ga da yg bela #biarkanHidup).

The fact of Mary Jane’s “foreignness” was further emphasized in another set of tweets. Ramadhoni Fitra @RamadhoniFitra complained that while, “Mary Jane and her friends (foreign citizens) are PROTECTED, when Indonesian migrant workers are sentenced to death there is NO REACTION. What the hell’s going on? #BiarkanHidup” (Mary Jane dan warga asing DIBELA, sementara para TKI dihukum mati TIDAK BEREAKSI. What the hell’s going on? #BiarkanHidup). dheladamm @dellainkaRA reproached fellow Indonesians for being
so active on twitter for Mary Jane, “Everyone shouts using the hashtag #BiarkanHidup for #MaryJane but one has never shouted for one’s own brother or sister although the case is the same” (semua orang pada teriak pake hashtag #BiarkanHidup buat #MaryJane tapi ngga pernah teriak buat sodara sendiri padahal perkaranya sama). Finally, icalsuhami @icalsuhami ranted against the unfairness of Mary Jane’s apparently special treatment, “Why was her execution postponed????? Is #MaryJane a child of Indonesia? How is it that for native Indonesians there is no postponement too?? #Biarkanhidup” (kenapa di tunda eksekusinya???? #MaryJane anak Indonesia mana?? koq yg org Indonesia asli gk d tunda jga?? #BiarkanHidup). The latter set of tweets demonstrates a rejection of the claim expressed in Mary Jane’s letter to Joko Widodo that she too is a “daughter” (anak) of the “Bapak Negara Indonesia” deserving of protection. As a “warga asing” (foreigner), she is not a “sodara”/”saudara” (brother/sister) and is definitely not an “anak Indonesia” (child of Indonesia). However, @jungrood took issue with these complaints from Indonesians. She tweeted, “TO COMPLAIN why TKIs do not receive similar support when they are executed DOES NOT MEAN that Mary Jane has no right to be supported” (YANG MENGELUH kenpa TKI tidak mendapatkan dukungan serupa kitika di eksekusi mati.BUKAN BERARTI Mary Jane tidak berkhan dukngan #BiarkanHidup). She further elaborated in another tweet that, “MARY JANE’S CASE must become the reminder for the people of Indonesia which must empathize with the fate of the TKIs” (KASUS MARY JANE seharusnya menjadi cambuk bagi rakyat Indonesia yang seharusnya berempati kepada nasib para TKI #BiarkanHidup). Finally, @jungrood wrote a tweet in English for Mary Jane herself, “I hope justice in your favor Mary Jane. This is not about nationalism but humanity. #BiarkanHidup.”

3. “I could have been Mary Jane Veloso”

Mary Jane’s case has become a reference point among activists in Indonesia on the difficulties faced by Indonesian migrant workers (Tenaga Kerja Indonesia (TKI) or buruh migran), Indonesian domestic helpers (Tenaga Kerja Wanita (TKW)) and victims of human trafficking and the international drug trade. Remittances from 6 million Indonesian workers overseas attained a record US$8.5 billion in 2014 while 12 million Overseas Filipino Workers (OFWs) remitted $28.40 billion in the same year (The Jakarta Post 20/04/2015). The rapid increase in the number of TKIs has also multiplied harrowing stories of exploitation, violence and maltreatment.

Merry Utama (b. 1974), who was arrested at the Sukarno-Hatta airport last October 2001 with 1.1 kilos of heroin in the lining of a bag which was gifted to her was sentenced to death despite indications that she was a victim of human trafficking and deception by a drug syndicate. She was a former Indonesian migrant worker who had contributed to the Indonesian economy. Like Mary Jane, Merry also wrote a letter to Jokowi pleading for her life. Her execution was postponed by Joko Widodo at the last minute on 29 July 2016. Several news articles in Indonesia likened her situation to that of Mary Jane Veloso (Tempo.Co 28/07/2016). Her father Siswandi, himself made an explicit comparison when he said, “If Mary Jane can do it, why can’t my daughter do it too?” (Masak Mary Jane, bisa anak saya Merry Utami tak
Retno Dewi, coordinator of the Badan Persiapan Serikat Perempuan Indonesia (Preparatory Council of the Women’s Union, Seruni) in Bali, said that the fate of Merry Utama was no different from that of “Marry Jane” (sic) (*nasib Merry Utami tidak berbeda dengan nasib Marry Jane*) (Merdeka.com 30/07/2016).

Rita Krisdianti’s (b. 1989) case is another well-known example in Indonesia (BBC Indonesia 30/05/2016). She worked seven months as a housemaid in Hong Kong before she was deceived and victimized by a drug syndicate on her way home. Rita was sentenced to death in Penang, Malaysia in 2013 for allegedly attempting to smuggle in 4 kilos of shabu. Anis Hidayah, observed that Rita’s case was “very similar to that which befell Mary Jane Veloso, a migrant worker from the Philippines” (*sangat mirip dengan yang menimpa Mary Jane Veloso*). Anis, was reported by newspapers as having cried during a last minute meeting with Jokowi on April 28, 2015 while pleading for Mary Jane’s life (CNN Indonesia 29/04/2015). She also became emotional when she visited the ramshackle shanty of the Velosos in Nueva Ecija after the postponement of Mary Jane’s execution.

Erwiana Sulistyaningsih (b. 1991), suffered eight months of extremely brutal treatment while working as a domestic helper in Hong Kong. Her employer was later convicted and sentenced to six years imprisonment (South China Morning Post 15/07/2016). Her case called attention to the plight of women migrant workers and created an international outcry for justice. Immediately after hearing of the postponement of Mary Jane’s execution, Erwiana tweeted, “There is still hope friend/comrade” (*Masih ada harapan kawan*). She wrote a piece entitled “I could have been Mary Jane Veloso” (The Jakarta Post 20/05/2015):

Mary Jane is just like me. She is just like the 3 million Indonesian women who have migrated for work.

We migrate because we have to. We don’t have power and money and we are put into the most vulnerable positions, physically, legally and economically. There are 278 Indonesians on death row around the world. Many of them are just like Mary Jane and me. Desperate people in desperate circumstances. Our President said he is here to govern for us, for the least powerful. He said he no longer wants to force Indonesian women to migrate into vulnerability. But if he really wants to support us he should give Mary Jane a fair trial because she is just like us.

If he eventually executes her he will be harming us all. We will no longer be able to call for justice for Indonesian migrant workers. Today I want to ask our President – will you kill a woman just like me? Or will you prove to us that you are listening to the people and give her a fair trial.

Advocates of migrant workers’ rights held demonstrations in Indonesia in support of Mary Jane Veloso (Cf. Figure 4). A joint statement signed by organizations like Jaringan Buruh Migran Indonesia (JBMI), Serikat Buruh Migran Indonesia (SBMI), Migrant Care, and many others entitled “Joint Statement: Protect Migrant Workers, Save Mary Jane and 278 Migrant Workers from the Death Penalty! and Enforce Human Rights” (*Pernyataan Sikap Bersama: Lindungi Buruh Migran, Selamatkan Mary Jane da 278 Buruh Migran dari Hukuman Mati! Dan Tegakkan Hak Asasi Manusia*) called for a Peace Rally to be held on 27 April 2015 (Time.com
Like Erwiana, they stressed the implications of the execution of Mary Jane on the fate of Indonesian migrant workers:

What Mary Jane experienced is actually no different (tidak berbeda) from the stories of dozens of migrant workers who have been sentenced to death overseas and 278 other individuals who at this moment are threatened by the death penalty... How can we fight for Indonesian migrant workers and other citizens who are threatened by the death penalty if President Jokowi is determined to let Mary Jane, who is clearly a victim, face death? To sentence Mary Jane to death will definitely hamper the efforts to save migrant workers threatened by the death penalty.

(Peristiwa yang dialami oleh Mary Jane sesungguhnya tidak berbeda dengan kisah-kisah puluhan buruh migran yang telah mendapatkan hukuman mati di luar negeri dan 278 orang lainnya yang saat ini masih terancam hukuman mati... Bagaimana kita akan mampu memperjuangkan buruh migran dan warga negara Indonesia lainnya yang terancam hukuman mati jika Presiden Jokowi tidak segan membiarkan Mary Jane Veloso yang nyata-nyata korban untuk dihukum mati? Menghukum mati Mary Jane tentu akan menghambat upaya penyelamatan buruh migran yang terancam hukuman mati.)

The International Migrant’s Alliance (IMA) headed by Eni Lestari, a former Indonesian migrant worker in Hong Kong, released a statement commemorating International Women’s Day 2016 entitled “Migrant Women Worker Rise Up and Fight for Our Rights, Dignity and Future” (Perempuan Migran Bangkit Perjuangkan Hak Kita, Kehormatan Kita, Masa Depan Kita) in which Veloso figures prominently:

“Women hold up half the sky and women have power.”

Women and men of the world have already seen the power, the power to build movements and develop international solidarity.

We have seen the collective effort of the peoples of Indonesia, Philippines and many other countries which actively took part in each international campaign to save Mary Jane Veloso. She is a migrant worker from the Philippines who was imprisoned and sentenced to death in Indonesia for having banned drugs in her possession.

Mary Jane was spared from execution, although her freedom and innocence must still be fought for. This case is a demonstration of collective strength that the international movement of migrant workers continues to advance, but sadly, it also shows the reality that women migrant workers continue to be victimized, tortured and abused.

Many migrant domestic workers become the victims of exploitation such as inhuman wages and maltreatment. Many women become the victims of human trafficking and the drug trade... Neoliberal Globalization has caused much suffering for many women, above all migrant women workers. Neoliberal Globalization has forced many women to migrate through the neoliberal policies and women migrants have experienced a lot of discrimination and inequality, not only in terms of gender but also in terms of class, race...
and age. Neoliberal Globalization considers profits more important than human rights (hak-hak manusia).

(“Perempuan menyangga setengah langit dan perempuan memiliki kekuatan”.
Perempuan dan laki-laki di seluruh dunia telah melihat kekuatan, kekuatan untuk membangun gerakan dan membangun solidaritas internasional.
Kita telah melihat upaya bersama dari masyarakat Indonesia, Filipina dan banyak di negara lain yang telah aktif terlibat secara langsung dalam setiap kampanye internasional untuk menyelamatan nyawa Mary Jane Veloso. Dia adalah seorang pekerja migran dari Filipina yang dipenjara dan difonis hukuman mati di Indonesia karena kasus kepemilikan obat-obatan terlarang.
Mary Jane akhirnya terhindar dari eksekusi hukuman mati, meskipun kebebasannya secara terhormat masih harus terus diperjuangkan. Hal itu menunjukkan kekuatan kolektif pertanda bahwa gerakan migran internasional terus maju, namun sayangnya, hal itu juga menunjukkan bahwa realita perempuan migran terus menjadi korban, disiksa dan dilecehkan.
Banyak pekerja rumah tangga migran menjadi mangsa eksploitasi tenaga kerja seperti upah yang tidak manusiawi dan mendapatkan perlakuan buruk. Banyak perempuan menjadi korban perdagangan manusia dan perdagangan narkoba… Globalisasi Neoliberal juga telah menyebabkan begitu banyak kesengsaraan bagi banyak perempuan, terutama perempuan migran. Globalisasi Neoliberal telah memaksa banyak perempuan untuk bermigrasi melalui skema kebijakan neoliberal dan perempuan migran sudah mengalami banyak diskriminasi dan ketidaksetaraan, tidak hanya dalam hal gender tetapi juga kelas, ras, dan usia. Globalisasi Neoliberal menganggap keuntungan pendapatan itu lebih penting dari pada hak-hak manusia.)

4. Conclusion

The ultimate question which arises in all these textual materials revolves around the conditions under which Mary Jane Veloso can still be considered to have rights as a person already (unjustly) condemned to death. (One could resort here to a discussion which is a little bit indebted to Giorgio Agamben’s reflections (2008)). It seems that Veloso’s own efforts to conceptualize this situation rests upon two conditions: (1) the rights of her children (hak anak-anak) who will be deprived of their right to be with their mother if she is executed.; (2) her own rights to protection as simultaneously existing in the mutually exclusionary states (marked out linguistically) of being an “anak bangsa Indonesia” (child of the Indonesian nation) and an “anak ng bangsang Pilpinas” (child of the Philippine nation). Since the state of being “anak Indonesia” implies being native-born to Indonesia, @icalsuhaimi was understandably indignant that Veloso could be considered as having the rights to protection of an “anak Indonesia” or an “orang Indonesia asli” (native Indonesian). @dellainkaRA also took issue with the overflowing empathy which Indonesians have shown for a foreigner such as Veloso by accusing them of having forgotten their own true “sodara”/”saudara” (brother or sister). Veloso’s discourse is
therefore both a literal affirmation and a metaphorical questioning of the foundation of “human rights” (hak-hak manusia) which can today only be disastrously conceived of as the rights of native born (or “reborn”) “citizens” within the boundaries of nation-states.

On the other hand, the NGO workers and activists who have participated in the international campaign to save Mary Jane Veloso, work on a discourse on rights which does not require the fact of “birth” or “nativity” but only of recognizing oneself (e.g., Tenaga Kerja Indonesia) in the other (e.g., Overseas Filipino Worker) under the intensifying conditions of discrimination, impoverishment, exploitation and exclusion generated by neoliberal globalization. This argumentation follows certain patterns such as: (1) the fate of X is no different from the fate of Y (nasib X tidak berbeda dengan nasib Y); (2) the case of X is very similar to the case of Y (kasus X sangat mirip dengan kasus Y); (3) the story of X is not different from the story of Y (kisah X tidak berbeda dengan kisah Y). Erwiana Sulistyaningsih asserted therefore that, “I could have been Mary Jane Veloso” and concludes that, “If [President Jokowi] eventually executes her he will be harming us all.” It is already clear that the fate of the Mary Jane’s of the world does not depend on the heart and wisdom of the “Bapak-bapak” of nations but on the determination of women migrant workers (perempuan migran) to fight for their rights (perjuangkan hak kita) and to build and strengthen international solidarity (membangun solidaritas international) among their ranks. Perhaps it is not only new forms of “internationalist solidarity” but also a new “rights of humanity” which will arise from the intensifying struggles of migrant workers in all parts of the globe.

References


Figure 1: Mary Jane Veloso on Kartini Day (22 Apr. 2016)

Figure 2: Mary Jane Veloso’s Letter to Indonesian President Joko Widodo

Table 1: Transcription and Translation of Mary Jane Veloso’s Letter to Indonesian President Joko Widodo
Kepada Bapak President Joko Widodo

Saya sungguh-sungguh memohon kepada yang Mulia, untuk mengampuni saya dari hukuman Mati, saya percaya dan yakin bahwa Bapak punya hati nurani dan sangat bijaksana untuk mengambil keputusan yang manusiawi.

Saya sebagai ibu yang punya dua anak yang masih kecil dan sangat membutuhkan kasih sayang seorang ibu yang mereka cintai.

Bapak yang Mulia saya percaya bahwa Bapak sebagai ayah untuk anak Bapak, bisa merasakan apa yang anak Bapak rasakan kalau anak Bapak yang ada di posisi anak-anak saya, pasti sangat menyakitkan karena mengambil hak anak-anak saya untuk bersama dengan ibu mereka dengan tidak mengabulkan permohonan Grasi saya.

Bapak yang Mulia, saya percaya sebagai Bapak Negara Indonesia seharusnya Bapak melindungi anak-anaknya terutama yang benar-benar tidak bersalah.

Saya sungguh-sungguh mohon selamatkan saya dari hukuman mati dan berikan saya kesempatan untuk bersama dan membesarkan anak-anak saya.

Tuhan selalu Memberkati Bapak President Joko Widodo dan seluruh keluarga Bapak.

Lapas MAS R.S. Wirogunan

Mary Jane F. Veloso
Mary Jane Fiesta Veloso

To Honorable President Joko Widodo:

I sincerely appeal to you, Honorable Sir, to grant me a pardon from the death penalty. I believe and am certain that you have a compassionate heart and are very wise to make a humane decision.

As a mother, I have two children who are still small and need the love of a mother very much whom they love in return.

Honorable Sir, I believe that as the father of your child, you can feel what it would be like if your child were in the position of my own children, it is surely very painful because it would take away the right of my children to be with their mother, if my plea for pardon is not granted.

Honorable Sir, I believe that as the Father of the Indonesian Nation you should protect your children, above all those who are genuinely innocent.

I sincerely pray to to be saved from the death penalty and to be given the opportunity to bring up my children.

May God always bless Honorable President Joko Widodo and his whole family.

Wirogunan Correctional Facility
Jogjakarta
16 April 2015

SIGNED
Mary Jane Festa Veloso

<table>
<thead>
<tr>
<th>Table 2: Transcription and Translation of Mary Jane Veloso’s Letter to Philippine Vice President Jejomar Binay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Para sa mahal kung Pangalawang Pangulo nang Pilipinas</td>
</tr>
<tr>
<td>Ako po si Mary Jane Fiesta Veloso, lubus po</td>
</tr>
<tr>
<td>Dear Vice President of the Philippines</td>
</tr>
<tr>
<td>I am Mary Jane Fiesta Veloso and I am pleading for your help, please save me from</td>
</tr>
</tbody>
</table>
ako humihingi nang tulong sa inyo, iligtas po niyo ang aking buhay sa hatol na kamatayan, mayroon po akong dalawang anak na maliliit pa at nangangailangan nang inang mag-aaruga, magpapatnubay sa kanila at nangangailangan nang pagmamahal nang isang ina.

Vice President Binay, kayo lang po ang makakatulong sa akin, hawak nyo po at nang Pangulong Pilipinas Ninoy Aquino ang kaligtasan nang aking buhay, Vice President Binay wala po ako kasalanan, isa lang po ako biktima, hindin-hindi ko po magagawang makatulong para sa akin. Vice President Binay, wala po ako kasalanan, isa lang po ako biktima, hinding hindi ko po magagawa ang ibinibintang nila sa akin, mas gugustuhan ko pa pong magtrabaho bilang katulong kahit na mahanap ang aking trabaho, kahit na po mahirap ang aking buhay, Vice President Binay, isang ina ang aking magulang na may takot sa Panginoon na sumusumpa po ako sa harap ng Panginoon sa mga kasalanan kahit na ako lang nang biktima at magsasali ng mga mga taong gumagawa ng kasamaan, marami man pong hindi naninwala sa lawak ako ng mga kasalanan alam ko po na alam nang Panginoon na nagsasabi ako nang pawang katotohanan.

Dear Vice President Binay, I believe that you will not leave me to fend for myself. Thank you very much for all the help you have given me and I also thank the President of the Philippines Ninoy Aquino as the father of our Nation I know that our President did not stop helping and looking for ways to help me and the death penalty will not be implemented.

I end this letter here, I hope that I will receive justice for what happened to me. I would like to thank our countrymen who are prepared to help, also the Philippine Embassy in Jakarta, DFA, who is looking after my case, also the lawyers who are working on my case and all the people helping out to save me, even if they are not Filipinos but they are prepared to help and are always praying for my safety.
Pilipinas Ninoy Aquino bilang ama nang ating Bansa alam ko po na hindi din po tumitigil ang ating Pangulo sa pagtulong at paghanap nang paraan para matulungan po ako at nang hindi matuloy ang hatol na kamatayan sa akin,

Hanggang dito na lang po ang sulat ko, umaasa po ako na makakamit ko po ang katarungan sa nangyari sa akin, nagpapasalamat din po ako sa mga kababayan natin na handang tumulong, ganoon din po sa ating Embassy Filipina, Embassy Di Jakarta, DFA, na umaasikaso sa kaso ko, ganon din sa mga abogado na may hawak nang kaso ko at sa lahat nang taong tumulong na mailigtas ako, kahit na hindi sila Pilipina pero handa silang tumulong at palaging nagdadasal para sa kaligtasan ko.

GOD BLESS US.

Lubos na gumagalang

- (sgd.) Mary Jane F. Veloso

Table 3: Mirroring of Mary Jane Veloso’s Letter to Indonesian President Joko Widodo and Philippine Vice President Jejomar Binay on her two children

<table>
<thead>
<tr>
<th>Saya sebagai ibu yang punya</th>
<th>dua anak yang masih kecil</th>
<th>dan sangat membutuhkan kasih sayang seorang ibu</th>
<th>yang mereka cintai</th>
</tr>
</thead>
<tbody>
<tr>
<td>As a mother who has two children</td>
<td>who are still small and need very much the affection of a mother</td>
<td>whom they love</td>
<td></td>
</tr>
<tr>
<td>mayroon po akong dalawang anak</td>
<td>na malilit pa</td>
<td>at nangangailangan</td>
<td>nang inang mag-aaruga, magpapatnubay sa kanila</td>
</tr>
<tr>
<td>I have two children</td>
<td>who are still small and need</td>
<td>the care and guidance of a mother</td>
<td>of a mother who loves them</td>
</tr>
</tbody>
</table>

Table 4: Mirroring of Mary Jane Veloso’s Letter to Indonesian President Joko Widodo and Philippine Vice President Jejomar Binay on the Fathers of the Philippine and Indonesian Nations

<table>
<thead>
<tr>
<th>Bapak yang saya sebagai seharusnya anak-</th>
<th>terutama</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mulia percaya Bapak Negara Indonesia Bapak melindungi anaknya yang benar-benar tidak bersalah</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td><strong>Honourable Sir</strong> I believe as the Father of the Indonesian Nation You are obliged to protect your children above all those who are truly innocent</td>
<td></td>
</tr>
<tr>
<td><strong>Vice President Binay</strong>... bilang Pangalawang ama nang aming bansa iligtas po ninyo ang inyong mga anak sa kapahamakan lalong-lalu na po ang walang kasalanan</td>
<td></td>
</tr>
<tr>
<td><strong>Vice President Binay</strong> as the Second Father of our Nation please save your children from danger above all those who are innocent</td>
<td></td>
</tr>
</tbody>
</table>
Figure 3: Twitter Posts with hashtags #BiarkanHidup and #SaveMary Jane from 28 Apr. 2015 to 7 Oct. 2016
FIGURE 4: “Be Compassionate” (Berbesar Hatilah), Poster and Call to Action of Indonesian Migrant Organizations and NGOs on 27 Apr. 2015

Submitted: November 17, 2016
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Accepted: January 21, 2017
A MODEL TO DETERMINE RELIEF WAREHOUSE LOCATION IN EAST JAKARTA USING ANALYTIC HIERARCHY PROCESS

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ABSTRACT

Relief logistics has a critical role in the success of disaster relief operations. One way to improve the smoothness of relief logistics activities is the strategic placement of storage facilities to ensure that relief aids reach the disaster victims in short amount of time. This paper presents a decision-making model to determine the location of relief warehouse using Analytic Hierarchy Process (AHP). Firstly, we identify a set of criteria to be considered in the model by reviewing the literature and conducting in-depth interviews (IDIs) with representatives from regional agency for disaster management (BPBD) and The Indonesia Red Cross (PMI) in Jakarta. We then develop the AHP model with first-level criteria, namely costs, geographic location, infrastructure, proximity, and macro environment, and we consider three alternative locations (Cipinang Besar Utara, Cipinang Besar Selatan, and Pondok Kelapa) for relief warehouse to serve victims of floods in East Jakarta. The pairwise comparisons are conducted by five experts, and the results show that geographic location has the highest weight, while cost has the lowest weight, and Cipinang Besar Utara is chosen as the preferred location.

Keywords: Analytic Hierarchy Process; Location Selection Criteria, Relief Logistics, Warehouse

1. INTRODUCTION

Indonesia is very prone to disasters. According to United Nations Office for Disaster Risk Reduction (UNISDR), in terms of disaster risk, Indonesia is ranked at 67 among 191 countries in the world (UNISDR, 2017). In the year of 2017 alone (until the month of August), the number of disaster in Indonesia is 1601 event that caused human loss of 295 people, and around 2.1 million people displaced from their homes (BNPB, 2017a). In terms of type of disaster, flood has occurred 575 times in 2017 alone (BNPB, 2017a). In Jakarta (the capital city of Indonesia), in particular, flood has happened 98 times in in the period of 2011-2015 (BNPB, 2017b).

UNISDR (2009) defines disaster as:

“a serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts.”

Based on the above definition, one way to reduce disaster risk is to increase the capacity, which may include infrastructure, institutions, human knowledge and skills, and collective attributes such as social relationships, leadership and management to manage disaster and improve
resilience (UNISDR 2009).

Logistics infrastructure plays an important role in increasing the capacity that leads to improved resilience towards disaster (Kusumastuti et al., 2014). Effective logistics management is one of the critical success factors in disaster management (Moe and Pathranakul, 2006). The objective of relief/emergency logistics is to transport the proper emergency supplies promptly to people affected by the disasters in order to minimize human suffering and death (Balci̇k et al., 2008). Relief logistics is an important issue as it accounts for eight percent of the total relief or humanitarian operations (Van Wassenhove, 2006).

Relief/emergency logistics covers activities/issues, such as evacuation, stock pre-positioning, facility location, relief distribution and casualty transportation (Roh et al., 2015). The role of warehouse pre-positioning in disaster management is to increase the capacity to deliver sufficient relief aid within a relatively short timeframe, and to provide shelter and assistance to disaster victims (Caunhye et al., 2012).

Previous research related to the selection of warehouse locations for relief/humanitarian operations have been done in the past, for instance by Roh et al. (2013), Roh et al. (2015), Caunhye et al. (2016), and Maharjan and Hanaoka (2017). However, different type of disaster and different conditions in the disaster area may require different decision-making model. This research aims at developing a decision-making model to determine the best location for relief warehouse in East Jakarta district, related to the frequent event of floods in the area. East Jakarta district experienced severe flood in 2004, in the area of Kampung Melayu and Bidara Cina in particular, the water level reached 7 meters, because both areas are located in the Ciliwung riverbank (BNPB, 2014).

The model is developed using analytic hierarchy process (AHP) (Saaty, 1980) as it allows multiple criteria to be taken into account in the decision making, and thus, fits with the problem of determining warehouse locations for relief supplies.

The remainder of the paper is structured as follows. Research methodology is presented in Section 2, followed by explanation of results and discussions in Section 3, and conclusion in Section 4.

2. METHODS

In order to identify criteria that will be used to select the best location for relief warehouse, we conduct literature reviews. The identified criteria are then discussed with experts in the area through in-depth interviews (IDIs) with three representatives from institutions that are usually involved in relief/humanitarian activities in Jakarta, namely Regional Body for Disaster Management Jakarta (BPBD Jakarta), Jakarta Red Cross (PMI Jakarta), and East Jakarta Red Cross (PMI Jakarta Timur). This to ensure that the chosen criteria and sub-criteria are relevant with the case of selecting the best location of relief warehouse in East Jakarta district.

The potential locations for the relief warehouse are also determined based on the recommendations from the informants and secondary data obtained from the institutions. The resulting criteria and alternatives (potential warehouse locations) are then structured as a decision-making model using AHP.

We ask five experts from the abovementioned institutions to conduct the nine-scale pairwise comparisons of AHP (Saaty, 1980). Weights of all criteria, sub-criteria and alternatives are
obtained by using Expert Choice software.

3. RESULTS AND DISCUSSION

3.1. The Decision-Making model

Determination of the location of relief warehouse in East Jakarta district can be considered as a complex problem, because it must take into accounts the potential area affected by the flood, the proximity to the relief aid donor locations, and the land availability in the area. Based on the literature review and IDIs with representatives from institutions that are usually involved in relief/humanitarian operations, we identify five selection criteria, namely, costs, geographic locations, infrastructure, proximity, and the macro environment, a total of twelve sub-criteria. The identified criteria and sub-criteria from literature, combined with criteria suggested by experts are presented in Table 1.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Sub-criteria</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs</td>
<td>Transportation cost</td>
<td>Ashrafzadeh et al. (2012)</td>
</tr>
<tr>
<td></td>
<td>Land cost</td>
<td>Ko, 2005</td>
</tr>
<tr>
<td>Geographic Location</td>
<td>Located in disaster-safe area</td>
<td>IDIs</td>
</tr>
<tr>
<td></td>
<td>Land availability</td>
<td>Ko, 2005</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Public transportation</td>
<td>Ko, 2005</td>
</tr>
<tr>
<td></td>
<td>Access to airport and seaport</td>
<td>IDIs</td>
</tr>
<tr>
<td></td>
<td>Road access</td>
<td>IDIs</td>
</tr>
<tr>
<td></td>
<td>Utilities</td>
<td>Turgut et al., 2011</td>
</tr>
<tr>
<td>Proximity</td>
<td>To the affected area</td>
<td>Turgut et al., 2011</td>
</tr>
<tr>
<td></td>
<td>To the relief aid entry points</td>
<td>Ashrafzadeh et al., 2012</td>
</tr>
<tr>
<td>Macro environment</td>
<td>Security</td>
<td>IDIs</td>
</tr>
<tr>
<td></td>
<td>Area’s development plan</td>
<td>Ashrafzadeh et al., 2012</td>
</tr>
</tbody>
</table>
The costs criterion includes transportation costs to deliver relief supplies to the affected area and the land/building purchasing/leasing costs. The geographic location criterion is defined as the condition of the potential location i.e. whether it is located in the disaster-safe area and whether the available land is sufficient for the warehouse (including for parking space and the possibility for facility extension). The infrastructure criterion covers aspects such as the availability of public transportation, access to airports and seaports, as well as utilities (clean water, electricity, and telecommunication network). The proximity criterion, on the other hand, is determined by considering the distances between potential locations and the affected area, and between the potential locations and the entry point of relief supplies. Lastly, the macro environment criterion includes the security of the area from criminal activities and potential conflicts, and the development plan of the area.

The potential locations for the relief warehouse are determined by considering the geographic location of the sites, i.e. whether they can cover the potential area in East Jakarta district affected by the flood. The selection process is also conducted by taking into accounts experts’ opinions and experiences in handling floods in East Jakarta, as well as considering areas which suffer the most during floods, namely Jatinegara, Makasar, and Kramat Jati sub-districts. The three alternative locations for the relief warehouse, namely Cipinang Besar Utara and Cipinang Besar Selatan (located in Jatinegara sub-district), and Pondok Kelapa (located in Duren Sawit sub-district), see Figure 1.

We structure the criteria, sub-criteria, and alternatives, and the resulting decision-making model is presented in Figure 2.

![Figure 2 The decision-making model](image)

3.2. The Criteria and Sub-criteria Weights

As previously mentioned, we ask five experts to conduct nine-scale pairwise comparisons of the
level of importance of criteria, sub-criteria and alternatives. The resulting weights for all
criteria, sub-criteria and alternatives are presented in Table 2. The consistency ratio of all
experts in all criteria, sub-criteria and alternatives are in the range of 0.06 to 0.08. They are
below the limit of 0.1 and, thus, it can be concluded that all pairwise comparisons are
consistent.

It can be seen from Table 2, the experts think that the most important criterion in warehouse
location selection process is the geographic location, followed by infrastructure, proximity,
macro environment and costs respectively. This suggests that in setting up the relief warehouse,
 aspects such as whether the potential sites are located in the disaster-safety zone, the
availability of infrastructure and easy access to the area are very important to consider. The
costs, on the other hand, is not considered as a big issue, which is consistent with the main
objective of relief logistics, namely to deliver relief aids to the disaster victims as soon as
possible to minimize human loss and suffering.

In terms of the costs criterion, the results show that the experts think minimizing transportation
costs during relief/humanitarian operations has higher priority than warehouse initial land costs.
In the case of the geographic location criterion, the experts think that it is more important that
the warehouse is located at disaster-free zone than the land availability (whether the potential
sites is sufficient for parking space and the possibility of facility extension). This is because
facility location is considered as long-term decision, therefore, it is important to ensure that the
location will not be impacted by the floods.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Sub-criteria</th>
<th>Alternatives</th>
<th>Weights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs</td>
<td></td>
<td></td>
<td>0.054</td>
</tr>
<tr>
<td>Geographic Location</td>
<td></td>
<td></td>
<td>0.319</td>
</tr>
<tr>
<td>Infrastructure</td>
<td></td>
<td></td>
<td>0.282</td>
</tr>
<tr>
<td>Proximity</td>
<td></td>
<td></td>
<td>0.195</td>
</tr>
<tr>
<td>Macro environment</td>
<td></td>
<td></td>
<td>0.150</td>
</tr>
<tr>
<td>Costs</td>
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</tr>
<tr>
<td></td>
<td>Land cost</td>
<td></td>
<td>0.259</td>
</tr>
<tr>
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<td>Located in disaster-safe area</td>
<td></td>
<td>0.718</td>
</tr>
<tr>
<td></td>
<td>Land availability</td>
<td></td>
<td>0.282</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Public transportation</td>
<td></td>
<td>0.077</td>
</tr>
<tr>
<td></td>
<td>Access to airport and seaport</td>
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<td></td>
<td>Road access</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Utilities</td>
<td></td>
<td>0.208</td>
</tr>
<tr>
<td>Proximity</td>
<td>To the affected area</td>
<td></td>
<td>0.562</td>
</tr>
<tr>
<td></td>
<td>To the relief aid entry points</td>
<td></td>
<td>0.438</td>
</tr>
<tr>
<td>Macro environment</td>
<td>Security</td>
<td></td>
<td>0.553</td>
</tr>
<tr>
<td></td>
<td>Area’s development plan</td>
<td></td>
<td>0.447</td>
</tr>
<tr>
<td></td>
<td>Cipinang Besar Utara</td>
<td></td>
<td>0.397</td>
</tr>
<tr>
<td></td>
<td>Cipinang Besar Selatan</td>
<td></td>
<td>0.349</td>
</tr>
<tr>
<td></td>
<td>Pondok Kelapa</td>
<td></td>
<td>0.254</td>
</tr>
</tbody>
</table>
In terms of the infrastructure criterion, the results indicate that access to the main road is very important in selecting the warehouse location. Moreover, relief operations seldom use public transportation and, thus, it is considered less important than the availability of utilities and access to airports and seaports.

Concerning the proximity criterion, the close distance to the flood affected area is considered more important than proximity to the relief aid entry points, this is to ensure that relief supplies can reach the affected people in the shortest amount of time. Lastly, for the macro environment criterion, the experts think that making sure that the warehouse is located in a secure area is more important than the development plan of the area. This suggests that the security of the area is very important as it is to ensure that relief supplies will be securely stored.

Regarding the alternatives for relief warehouse, the results show that the potential sites in Cipinang Besar Utara and Cipinang Besar Selatan are more preferred than the site in Pondok Kelapa. The first two sites are located in Jatinegara sub-district, which area suffered the most in last flood in East Jakarta district. Hence, the combination of proximity and accessibility make both sites in Jatinegara sub-district have higher weights than the Pondok Kelapa site. Cipinang Besar Utara, in particular, has the highest weight because it has more land available and its environment is considered as safer that the other two sites.

4. CONCLUSION

Logistics infrastructure is one of the most important factors that determines the success of relief/humanitarian operations during and post-disaster events. The paper presents a decision-making model to determine the best location for relief warehouse in East Jakarta district to respond to floods that frequently occurred in the area.

Based on the literature review and results of IDIs with representatives from institutions that are usually involved in disaster management in the area, we identify five criteria, namely costs, geographic location, infrastructure, proximity, and macro environment and a total of twelve sub-criteria. Based on the IDIs results and analysis of secondary data, we also determine three alternative locations for the warehouse in Cipinang Besar Utara, Cipinang Besar Selatan and Pondok Kelapa.

The results show that locating the warehouse in the disaster-free zone has the highest priority in the process, and that the costs criterion is not considered as an issue, as the objective of relief logistics is to minimize human loss suffering and loss. The results show that the site in Cipinang Besar Utara is selected as the preferred location for the relief warehouse as it is close to the potential area affected by floods, it has more land available and it is considered as safer than the other two sites.

5. REFERENCES


Rethinking Gender Intricacy of Multicultural Women in Indonesian Novels for Shaping the Understanding of Woman Rights in the Multicultural Country

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Abstract
In patriarchal society, women are expected to fight against the domination of male power. Meanwhile, in a multicultural country such as Indonesia, women not only have to be concerned over male power, but also should fight against the cultural and legacy traditions of ancestral heritage. Multicultural women are confronted with double repression that disempowering their rights. Various forms of resistance were made by multicultural women to fight for their existence. This is what depicted in several Indonesian novels, especially Indonesian novels contained with local nuance. This study will examine how the double repression experienced by multicultural women in Indonesian novels with local nuance and how they resist the cultural and traditional issues that impose their rights and freedoms. The method used in this research is descriptive qualitative with multicultural feminism theory. This study aims to cover three findings, 1) the form of oppression faced by the multicultural women depicted in novels; 2) the resistance form of multicultural women in novels; and 3) the changes of multicultural women views about their rights that are presented in the novels.

Key words: Multicultural Feminism, Multicultural Women, Women’s Rights, Traditions, Indonesian Novels.

Introduction
In the multicultural society such as Indonesian, the issue of gender inequality is still a remarkable problem for women to deal with. Indonesian women who are born and lives amid the customs diversity must struggle with the oppression which does not only come from men but also from the patriarchal tradition. Patriarchal culture obligates women to fight against the dominance of men’s power who subduct their freedom. Women are presented as liyan (the other) in order to establish the superiority of men as an individual. The image of inferiority and submissiveness of women is constructed in such a way that the strength of men is increasingly visible. This construction ultimately silences women’s existence and even losing it. Moreover, for Indonesian women, double oppression in the form of custom rules and traditions of ancestral heritage further makes them silenced and marginalized as a subject as well as an individual.

This condition is seen in Javanese and Balinese culture. Javanese women, for example, must grapple with Javanese customary powers which thus validate men’s position and discriminates women. Banjar women, for example, as revealed by Nasution (2016: 58), have no voice to choose their own husband. They cannot resist the tradition named kawin
The women of this tribe have no voice to hold their own marriage, their residence, and their sexual intercourse. These women must obey the rules of religion and custom in their tradition.

The concept of Javanese women is also depicted in ancient Javanese literary works. Susanto in Budianti (2010: 53) reveals that there are five values that must be possessed by Javanese women represented in each of the five fingers. First, the thumb (pol ing tyas) means that women must fully surrender to her husband. Second, forefinger means that women should not break the guidance from the husband (tudhung kakung). Third, middle finger (penunggul) means that women should always exalt and meet the husband's degree. Fourth, ring finger means that women should always give a pleasant expression and a sweet face when the husband wants something from her. Fifth, little finger (jejenthik) means that as a woman, she must be skilled and resourceful to please and serve the husband. The concept of male and female relation reflected in this tradition illustrates how the position of women is marginalized. Even in this concept, women are also called as tiyang wingking (someone in behind). From this concept, it appears that women are silent with the term lego lilo (compliant) in relation to men.

In addition to these patriarchal issues, women also have to face the issue of social strata (caste). Balinese women for example, they must face the patriarchal system in the form of a patrilineal kinship system. Bali embraces a patrilineal kinship system in which customary law in Bali is strongly influenced by a patriarchal culture that places male status higher than women (Rahmawati, 2015: 67). Sancaya in Widyani and Hartati (2014: 151) responds to the injustice experienced by this Balinese woman with the concept of purusha (matters relating to men) and predana (matters relating to women). These two concepts are the basis that determines the roles and social rules for men and women, in which it cannot be exchanged. In addition, Hinduism also became the basis for the development of the concept of customary law as a social control.

For Balinese women, the struggle of the social caste hierarchy (Brahmans, Kshatriyas, Vaishyas, Shudras) appears for example in the case of a daughter born of a Shudras woman who married a Brahman. She still does not get the honorary title of Ida Ayu (Dayu) despite his father's higher caste. Furthermore, the title in the name of Balinese women is crucial to derive the respect and freedom of speech in the community. This case presents that Balinese women of lower caste have to experience double discriminations, either from men or for women of higher class.

Women in a multicultural country have different forms of oppression and resistance attempts between one another. As revealed by Tong (2009: 200) that not all women are created equal to one and another. It depends on race, ethnicity, gender identity, age, religion, education, occupation, marital status, health condition, and so on. These multicultural women's issues are visible in Indonesian literary works which contain the local nuance, especially literary works with local colors of Java and Bali.

Therefore, this study will examine how the image of multicultural women's oppression in the Indonesian novel with the taste of Javanese and Balinese culture, how they show their resistance to save their existence, and how their views change to respect their rights as women. Two novels depicting the issue of Javanese and Balinese women's oppression are Kenanga by Oka Rusmini and Pengakuan Pariyem by Linus Suryadi AG. Kenanga is written by Balinese woman that presents the complicated tradition in Bali. Meanwhile, Pengakuan Pariyem is written by Javanese man yet delivers the voice of
Javanese woman. These two novels remarkably depict gender intricacy issues especially for those who face the same issue as multicultural women in Indonesia. Therefore, these two novels are selected as the corpus of this research.

**Research Method**

To answer the identified problem above, this research will use analytical descriptive method which emphasizes the study on textual analysis. This study is a research with gender-based study. The theory used in this study is multicultural feminism to dissect how the gender struggles faced by multicultural women are portrayed in Indonesian novels which contain the nuance of Java and Bali.

This theory of multicultural feminism is used on the basis that women on different parts of the world do not face the same oppressive issues. According to Tong (2009: 200) women do not act and think the same way. Each woman has a different purpose. This does not accommodate in western feminism theories. Tong, further explains that multicultural feminism is a place to fight for the existence of women who have diversity and differences among women themselves, especially the space for women to speak out, that they are facing different issues from other women.

Arivia in Turaeni (2010: 259) asserts that the feminism which has been exists is spared to see the oppression of women as a whole. Therefore, the oppression seen by western feminism is only oppression as a definition for women under the dominance of patriarchal culture. In fact, the oppression of women as revealed by Tong, is closely related to race, social class, sexual preference, age, religion, education, employment opportunities, and others (Tong, 2009: 200). Tong explains that women are not created equal. This difference then leads to conflicts experienced by women.

Broadly speaking, this multicultural feminism bridges the idea of diversification of problems experienced by women in terms of cultural and tradition repression. Therefore, this multicultural feminism is applied to see how gender intricacy is experienced by women from multicultural countries like Indonesia.

**Result and Discussion**

**Javanese and Balinese Women Oppression**

Javanese women character whose became the focus of this study in *Pengakuan Pariyem* is Pariyem, while Balinese female characters in *Kenanga* is represented by some figures such as Kenanga, Luh Intan, Kencana, Kemuning, and Dayu Galuh. These figures are representatives of multicultural women who face double oppression from men, customs, and traditions. These two novels depict such an overwhelming women problem such as the stratification of social class and caste, the struggle of customary values and restrictive traditions, and the oppression of women linked to their relationship with men.

- **Stratification of social class and caste**

  The awareness of the position of *priyayi* (high class) and *wong cilik* (ordinary people) has been ingrained deeply under the consciousness of Javanese society. There are differences in classes that cannot be broken, however effort is made. This social stratification becomes a kind of measure of how power affects one's actions and behavior. At some level, the power of a priyayi is so invisible because it is dominated by the power of a king or a higher state. Meanwhile, on a more specific level such as a region and family, the power of *priyayi* then appears abundantly and dominant. This class matter is the
issue in which Pariyem has to face as a Javanese woman from a low social class.

Pariyem in *Pengakuan Pariyem* is *wong cilik*, Pariyem has no power of any kind to deny the wishes of depicted as a servant of a Javanese noble family named Kanjeng Cokro Sentono as an employer, either Cokro Sentono, Den Bagus Aryo (Cokro Sentono's son), or Ndoro Ayu Cahya Wulaningsih (wife of Kanjeng Cokro Sentono). The problem of social class does not only make Pariyem silenced in the presence of men, but also in the presence of women from the class above her. Despite being portrayed alive in the distinctive harmony of Priyayi's life, the portrayal of the character's attitudes appears that Ndoro Ayu portrayed as gentle, graceful, virtuous, and awake in his actions, while Pariyem is the opposite. Pariyem is described as a woman who is willing to surrender her body to men without marriage, including to Den Bagus Aryo.

In addition, in the case of Pariyem pregnancy from her secret relationship with Den Bagus, the absolute decision is determined by Kanjeng Cokro Sentono and his family. Pariyem as a *wong cilik* just accepts the decision with her resignation or in Javanese concept is called as the term *lego lil*. Although the Cokro Sentono family decides to accept Pariyem and her baby as his daughter-in-law and granddaughter, Pariyem's social class as a chamber does not change at all. Giving born a child of *priyayi* does not make Pariyem become a *priyayi*. Pariyem as a *wong cilik* who has no power whatsoever only accept every decision taken for her without disclaimer.

“It should nourish the family garden. Expect, everything goes as it is. Your work has not changed, as usual only one year living in the hamlet, in Wonosari Gunung Kidul. You are in charge of taking care of yourself and your baby, while all your needs are available.” (Linus, 2015:201-202).

Although there is a familial recognition of Pariyem and her baby, but in social terms, Pariyem is not legally married because Pariyem's position is just a servant.

“The days I must pass, but the inner joy accompanies. No marriage, no formal ceremony. No *gending Kebo Giro* reception. Between Ngayogyakarta and Wonosari in the shadow of united silence (...) my fate is only a servant, but inward I am a daughter in law.” (Linus, 2015: 206-207).

Furthermore, in the novel *Kenanga*, the issue of social stratification is more visible in the form of caste hegemony. Multicultural women in this novel actually came from the *Brahmin* class which is the highest class in the kinship system in Bali. These figures seem to present the conflicts faced by the Brahman class community in addressing customs and their relationship to the lower class like *Shudras*. The characters who experience injustice in this Caste system are Luh Intan and Jero Kemuning.

Luh Intan is actually daughter of Kenanga who was born in secret because of her secret
relationship with a Brahmin man named Bhuana. Kenanga herself is a sermon of Brahmin women. If viewed from this pedigree, in fact Luh Intan is a Brahman. However, this fact is ignored in the novel by presenting Luh Intan as a Shudras who is entrusted to the family of griya (Kenanga family) as servant. Regardless of the good treatment of Kenanga and Bhuana, as Shudra's feud, Luh Intan got much pressure from the griya family and also her peers (Dayu Galuh) who are a Brahmin woman. This is evident from how Galuh treats her. She often asked Intan to replace her with her duties.

“Tiang…have to…mentanding belabar an…every day. Help Tugeg Galuh…makes a tangkiah.” (Rusmini, 2017:8)

Likewise, with the attitude of Ratu Ibu (Mother of Kenanga), she often dislikes Kenanga who are treats Intan too much well even though Intan is just a servant in griya.

“She asked to make otonam for Luh Intan! She is crazy, isn’t she? Who she thought was Luh Intan? Whose kid? We are nobles. That can ruin our reputation before the community.” (Rusmini, 2017: 99)

Like Intan, Jero Kemuning is also a Shudra’s woman. She married the uncle of Prof. Rahyuda who is a Brahmin. Because of that, Kemuning get the title Jero. This marriage certainly does not base on love. Parents of kemuning entrust her at the request of the mother of Prof. Rahyuda’s uncle to be a wife. Kemuning has no power to resist especially when uncle of Prof. Rahyuda as a Brahmin has approved to marry her.

“Her marriage to Rahyuda's uncle is arguably a compulsion, for the agenda of the dating of the ancients. Uncle Rahyuda's mother asked Kemuning's mother to give her daughter to her wedding to be married to her son.” (Rusmini, 2017: 78)

- **Intricacy of customary values and restrictive traditions**
  As a Javanese woman who always adheres to the concept of lego lila, Pariyem shows her resignation. In the novel, Pariyem asserts that as a servant there is value (tradition) of Javanese that must always be held, that is the attitude of nrimo ing pandum or receiving everything that happens in her life.

  “If it is my fate
  As a servant, what's the trouble?
  Gusti Allah is infinite the justice, absolutely.
  I just want to accept it, just nrima ing pandum.” (Linus, 2015:23)

  The concept of nrima ing pandum has always been the value of acceptance as a Javanese woman when there is nothing can be done to change her destiny, Pariyem
chooses to accept and surrender. For Pariyem, in the concept of Javanese, life has been set up, she as a human living lives it. The concept is what ultimately makes the pregnant Pariyem just accept the decision from Kanjeng Cokro Sentono through the decision to make her not legally married.

“... as a servant of nDoro Kanjeng Cokro Sentono
at nDalem Suryamentaraman Ngayogyakarta
But with his eldest son playing romance
and now as a consequent I am pregnant
Wait a minute or not
O, I do not mind
Marriage is not my dream
which I am craving is a child
The living threads are knit in the offspring
long added to reach family link” (Linus, 2015:154)

The tradition and the silence of women also appear in Kenanga. In this novel, the problems face by multicultural female leaders are the issue of matchmaking tradition that still related to the caste and social strata, tradition of surrendering the children of the Shudra family to serve as servants in the Brahmin family, and tradition of Brahmin women's death.

Matchmaking in the Balinese tradition is commonly done especially for Shudra’s families who are requested by the Brahmin families. Women of the Brahmins themselves still hold this tradition of matchmaking. This is done to keep the dignity of their noble blood. A Brahmin man may marry anyone including Shudra's women, but Brahmin women may only marry men of the same class. If a Brahmin woman marries a man from a lower caste, then she will be subjected to social sanction, even thrown out of the griya family. This is because the patrilineal kinship system is adopted, in which the bloodline is in the male blood. The nobility of a woman disappears if she marries a man from a caste below her, as in the following quote.

“But this is Bali, Kenanga. There are customs that determine our lives. Moreover, we are nobles of the highest caste. Our place is in griya. We, Brahmins, are rewarded by Surya, exalted by people.” (Rusmini, 2017: 92)

“Being a noble woman is not difficult if you obey me. Choose a good man, who is equal. Remember, you are not only dealing with him, but also your degree.” (Rusmini, 2017:163)

“She (Galuh) remembered Biang Mayun, the woman who used to live behind her house. Biang Mayun nyerod, got married with unequal men.” (Rusmini, 2017: 240)

This is the fact that ultimately makes the Brahmin women (dayu) compete for a Brahmin man. The mother of the Brahmin girl always offers her daughters to the wealthy men of the Brahmin family so that her nobility is maintained, as experienced by Dayu Galuh below.

“Her mother is a strange woman who always offers her daughter (Galuh) to every rich
The *dayu* did not escape the demands of having to master the various skills to attract attention of the *Brahmin* men.

“Become the *dayu* should be versatile. That is the advice often comes out of her mouth when she sees the *bajang*, the young *griya* girl, many of them who are not adept at *nyacal*, making her own cake, or *metanding banten Saraswati*. Most bachelors who are reprimanded only will glance at each other with cynical smile.” (Rusmini, 2017: 227)

For *Shudra*’s women, they do not even have the opportunity to compete. Since childhood they have been handed over by their families to be servants of the *Brahmin* family or *griya* family.

“The custom in the *griya* is usually so, the children of common people who diligently work but poor and unable to school, often entrusted by parents to be a maid in *griya*.” (Rusmini, 2017: 5)

- **Men’s Power and Women Submissiveness**

  In the face of social class hegemony and the tradition, women are disempowering. Likewise, in the presence of men, women are always faced with absolute power that subordinates and oppresses their rights.

  Pariyem has to deal with the view of the man who always objectify her body and she could only accept with her compliance, *lego lila*. She also has to serve Den Bagus Aryo’s sexual desire without even having the opportunity to refuse because of her position as a servant.

  “Yes, yes, I am Pariyem. "Iyem" they called me everyday

  I also thrived

  My body develops as my father’s wish

  My body develops according to nature's instincts

  I am also bigger

  Until youth of Yogya tempt

  And often the violence,

  I'm stubborn

  I'm thick

  But I just let it go

  I'm okay with that,

  *I lego lila.*” (Linus, 2015:34)

  Meanwhile, Kenanga which is depicted as an independent and hard-hearted female figure remains weak when confronted with Bhuana’s power. Even so with Kencana who
always expects Bhuana's touches, but the absolute holders of their sexuality control are in Bhuana. These women still have to face the power of men who are not only absolute possession is by disempowering women, but also is supported by a patriarchal tradition. This is shown in Kenanga and Kencana narration as follows.

“Ah Bhuana, Bhuana. If you knew how I wanted you to be by my side, see Intan grow with me. At a time like this I just realized, how great the meaning of your presence in my life.” (Rusmini, 2017: 118)

“You're no longer excited about touching me. Your man's body always dies whenever my woman's body hole creaks, stirs up in a storm. Just cold, just a breeze of strange wind blows that shrinks from the pores of your virility (...) If you know how sick I am to have a perfect piece of meat, but it's slumped and dumped. How I feel crazy trying my own body flesh, to remain convinced that it was not languishing in vain.” (Rusmini, 2017: 112)

**Multicultural Women Resistance**

The various kinds of oppression experienced by multicultural women in this novel make them have to make some efforts to maintain their existence as women. This resistance effort is also presented in various forms either by directly opposing tradition or implicitly camouflaged with acceptance.

Pariyem who is a Javanese woman from a low social class will not be able to maintain her existence when she chooses the path of direct resistance. She is only a servant (wong cilik) who has no power whatsoever against the dominance of both male dominance, tradition, and domination. However, she cleverly uses the concept of lego lila in Javanese culture to obtain her ultimate happiness. For Pariyem, a visible rebellion can only be done by modern women such as Wiwit Setyowati (Den Bagus Aryo's sister) and not for a maid like herself. However, if it is understood further, Pariyem's acceptance efforts are the true form of the hardest revolt of a Javanese woman from a low social class like her.

For example, at the part when Den Bagus Aryo is tempted by Pariyem’s ravishing body, this woman actually enjoys the romance affair with Den Aryo. Pariyem is the one who taught the pleasure of this sexual relationship to Den Bagus Aryo, not the other way around, as it appears in the following quote.

“... as a servant of nDoro Kanjeng Cokro Sentono at nDalem Suryamentaraman Ngayogyakarta now, linked with his son Raden Bagus Ario Atmojo I teach him love O, this is attitude of young man Just nowadays he can reach.” (Linus, 2015: 43-44)

Meanwhile, the female figure in Kenanga choses the opposite effort. Kenanga who has understood the dominance of tradition and men chooses to go against both by stay unmarried and childbearing without marriage. His opposition to tradition also shows by being kind and loving to Luh Intan who is a Shudras, even before he knew that Luh Intan was her biological child. Kenanga becomes a modern and educated woman who has an
open mind so that she has a gap to escape the confines of customs and traditions. Kenanga’s resistance is shown by making herself a self-sufficient woman, ambitious, and not tied to any men, including Bhuana.

“She is a woman with a myriad of obsessions in the head. The obsession that for most people is unclear. She is too independent as a woman. Her confidence is too great, often frightening.” (Rusmini, 2017: 91)

Luh Intan who does not know that in fact she is a Brahmin ultimately chose to maintain her existence by fighting the dayu to get Mahendra. She does not care even if she is a Shudra and still exploits Mahendra's attachment to her.

“I will compete with the dayu, the wealthy young noble women all over the country to fight for Mahendra.” (Rusmini, 2017: 94)

On the other hand, Kencana who suffers injustice over her familial relationship with Bhuana chooses to vent her sexual desires with other men. It is supposed to maintain her sexual passion that had been unfulfilled by Bhuana, her husband.

“If you knew how I slaughtered the men. I let them greedily devour me. I let my lust spill over them all, their dozens. I made them slaves. I summoned them all, Bhuana, and I kicked, biting, I shook, I suck, I crushed until their roots popped in pain. They said I was crazy, but in fact they came and came again, the old and the new, begging for the storm of my lust, begging for a splash of wine madness. And I'm fair to them.” (Rusmini, 2017: 112)

These three women in Kenanga perform different forms of defense to maintain the same existence of justice and their gender equality. Although not as straightforward as the three women in Kenanga, Pariyem in Pengakuan Pariyem also shows her resistance efforts through her slogan to be always lego lila and nrima ing pandum.

The Changes of Multicultural Women’s Views

The awareness of multicultural women in the novel over their oppression makes them carry out various resistance attempts to maintain existence. This resistance ultimately leads to a change of view regarding their rights as women and as individuals. This change of view is seen from the change of attitude shown by Pariyem, Kenanga, and Luh Intan.

At the end of the story, Pariyem, who is only married in a series due to her low social status, has an open mind that in her social structure she is nobody, but in the harmony of life she has gained the happiness which she desires by conceiving and giving birth to the son of a priyayi.

Likewise, with Kenanga and Luh Intan, the problems of class and the hegemonic tradition can be dislocated by a change of view of the tradition. By living life as a single and choosing childbearing and raising children alone, Kenanga shows the attitude that tradition can no longer detain her soul to be a free, self-determinant individual. The change in views of this tradition actually emerges from the beginning, depicted with her attitude to Luh Intan even before she knew that the child is her biological child. Kenanga thus loves
Luh Intan regardless of her social stratification as a *Shudras* who is supposedly be her servant.

“What’s wrong, Luh? Don’t you like going to elementary school? “
“SD Saraswati is too expensive Ratu ...”
“Look, Luh. You are part of this family ... ”But Intan still cries. Kenanga could not stop thinking, how could a six-year-old girl know about life. How does this little girl really understand about her place in the hierarchy of life in this *griya*?” (Rusmini, 2017: 9-10).

The awareness of Luh Intan as a *Shudra*, although in fact she is a *Brahmin*, does not necessarily make her submissive. Instead, she increasingly has the ambition to defeat the *dayu*. This awareness she picks up after facing various repressions because of the fact that she is a *Shudra*.

**Conclusion**

From the discussion above it can be concluded that women in a multicultural environment such as Indonesia must face the issue of different religious pressures from one region to another. This difference will ultimately lead to different resistance attempts. Various issues of tradition that turn women into objects of repression are also experienced by Javanese and Balinese women in both novels. The characters in these novels undergo a double repression in which they had to face the male power which objectifies their body as well as the pressure of tradition that discriminates them.

The inherent belief in the ancestral culture makes women an object governed by tradition. Various ways are performed by female characters in these novels to show the existence of themselves as a person apart from the domination of male power and the restraints of tradition. This self-resistance is sought so that they can gain equal status and role in society, both in the presence of men and tradition.

**References**


AN APPROACH TO SEAFARER’S NON-CONFORMANCE TO STANDARDS ON-BOARD SHIP: A POSITIVIST POINT OF VIEW

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ABSTRACT

The manning and shipping industry has flourished throughout the years. It has played an important role in the country’s economic progress since Philippines is considered as the best and the biggest crew supplying nation to the global fleet according to Philippine Association of Manning Agencies (PAMAS). Filipino seafarers have become a vital component of the country’s Overseas Filipino worker (OFW). The objective of this paper is to explain the causal mechanisms that resulted to the non-compliance of seafarers in following simple instructions in the line of their work resulting to unfortunate situations such as accidents. This paper is more importantly directed to the different manning agencies and their foreign principals. Much as they are focused on company profits and revenues, making seafarers competitive as far as their skills are concerned, they are also responsible in keeping their seafarers safe and protected while they are on board. This is their fundamental role and goal before they can even proceed to making enhancements and improvements on company processes and structures. The phenomenon that is being observed is why Filipino seafarers, in spite of extensive trainings and in-house programs meant to ensure that seafarers will follow and comply with the standards set upon by the International Maritime Organization governing body, numerous accidents are still being experience because of the non-compliance of these procedures.

Keywords – Maritime accidents; Non-conformance; Positivism; Seafarer; Standards of training

1. INTRODUCTION

“A careful study of the accident reports reveals that 85% of all accidents are either directly initiated by human error or are associated with human error by means of inappropriate human response” (Ziarati, 2006, p.48). This is in line with the findings of a recent paper (IMO, 2005) that 80% of accidents at sea are caused by human error and that collision amounted to 60% of all accidents if grounding and contacts are included. The research shows that mistakes are usually made not because of deficient or inadequate regulations, but because the regulations and standards, that do exist, are often ignored. (Ziarati, 2006) The IMO clearly indicates the causes of many of the accidents at sea are due to deficiencies in maritime education and training (MET) of seafarers or disregard for current standards and regulations. In any study of accidents or claims we find a major cause to be "Lack of abiding by the procedures" and or "Non-compliance" with various regulatory requirements. According to the author, (Ziarati, 2006) he
believes that people must be allowed to make decisions and think on their own. Another possible cause of the non-compliance of these seafarers is lack of understanding of the procedures. There are occasions that the procedures are difficult to understand and so will be following them.

**POSITIVIST VIEW**

Positivism relates to the philosophical stance of the natural scientist and entails working with an observable social reality to produce law-like generalizations. “Positivism refers to a concept of knowledge, a concept of social reality, and a concept of science”. First, it is an epistemology that identifies scientific knowledge with covering laws—that is, statements of the type “if A occurs, then B will follow.” Second, it is an ontology that equates existence with objects that are observable. Third, it is associated with a self-understanding of scientific activity in which social science is independent of the reality it describes (Steinmetz 2005a: 32; 2005b: 281–83). This is what the researcher is trying to present through the paper. The phenomenon that if there will be sub-standard Maritime training center, it could lead to seafarers not being able to conform or follow standards and procedures while they are working on board. When this situation occur, it could ultimately result to Maritime accidents at the sea (ex. Collision, oil spillage, personal accidents, etc.) which as much as possible we don’t want to happen. This could have significant impact to the organizations profitability resulting to a lot of possible outcomes such as looking for other Nationalities to man their vessels, decrease the demand for seafarers, or automation of most of their tasks on board. Because of the diversity of these scholars in developing their own theories, relying on their subjective and objective traits, a more specific examination of rules and criteria for evaluation must be applied. Building on the works of previous students of theory construction (e.g., Dubin, 1969; Nagel, 1961; Cohen, 1980), researchers can define a theory as a statement of relationships between units observed or approximated in the empirical world.

2. **METHODS**

Currently, the author is part of a Maritime Training Center that provides various training programs for the Filipino seafarers as required by the STCW guideline. This courses are closely supervise and are being implemented by MARINA, the government agency responsible to oversee the welfare of the over-all Maritime industry. In the current organizational structure, the author is in charge of all marketing and sales related activities. He is responsible in establishing the marketing mixed strategies and the preparation of the sales target for the team. He is also in charge of gathering client’s needs and requirements and comes up with recommended training programs for the foreign principal’s requirement. Lastly, he consolidate and analyze client issues and concerns and recommends appropriate interventions. He is directly reporting to the president and vice-president of the company which is the reason why he is able to communicate easily with the owners of the firm.

The context of this study was aimed towards knowing the major factors that resulted to seafarer’s non-conformance to standards on board ship in a positivist point of view. The work of the author includes visiting a lot of manning agencies to communicate with the crewing managers to see if they have concerns pertaining to the trainings of their seafarers.
these crewing officers are also seafarers themselves. There are also a lot of instances where the author is able to engage with the seafarers while enrolling in their company. Such interaction resulted to the author gaining a lot of information, feedbacks, and concern affecting the maritime training industry and key issues in their seafaring profession as well. Through observation, interview, and engagement, the author was able to describe in detail the phenomenon of the non-conformance to standards of the seafarers while working on board.

3. RESULTS AND DISCUSSION

FACTOR THAT LED TO THE NON-CONFORMITY OF SEAFARERS TO RULES AND STANDARDS ONBOARD

A factor that led to the non-conformity of Filipino seafarers in following the rules and guidelines that were already taught to them by different Maritime training centers is the existence of substandard maritime training centers. This factor may indirectly be the reason why Maritime accidents at sea occur causing damage and destruction in the environment and resulting to huge losses for the foreign principals who own these vessels.

Substandard Maritime Training Centers in the Philippines

The Manning Agencies require each crewmember lined-up to undergo training and seminar at approved training centers only, to enhance their competence above and beyond the STCW ‘95 requirements. Such trainings and seminars afford the crewmembers the opportunity to improve their nautical and engineering skills, as well as their knowledge of safety at sea. These Maritime training centers are duly accredited by MARINA, an agency of the Philippine government under the Department of Transportation responsible for integrating the development, promotion and regulation of the maritime industry in the Philippines. Training can be defined as the acquisition of knowledge and competencies as a result of learning that relate to specific useful competencies. It has specific goals of improving one's capacity, capability, productivity and performance. “A comprehensive training and development program helps in deliberating on the knowledge, skills and attitudes necessary to achieve organizational goals and also to create competitive advantage”. (Peteraf 1993 as cited by Olusanya, Samuel Olumuyiwa, et.al., 2012).

The company that the author is part with is involve in training Filipino seafarers and the aim of their training center is to make sure that once a seafarer work on board, he can be both efficient and productive in helping their organization accomplish their own goals as well. “Training enables the employees to deal with the changing jobs and roles. Training develops knowledge, skill and attitude for handling jobs most efficiently. Training bridges the gap between the current level of employee KSA (Knowledge, Skill, Attitudes) and the required level of KSA to handle the job efficiently. “Competence is generally defined as skills, qualifications and knowledge that gives a person ability to work as a part of a professional team or, when it comes to maritime activities, a crew.” (Berg, et.al., 2013, p.13) The problem arises when MARINA becomes too lenient in the accreditation of these Maritime Schools and Training Centers. The personal observation of the researcher, since he is part of a Maritime Training Center for more than a decade is that upon talking with
seafarers, there are some Training centers that does not actually train them but rather let them watch videos related to the course they enrolled. There are some cases where seafarers would even be seen bribing their instructors to allow them not to attend these training anymore so that they can be with their families. These are all familiar scenarios knowing for a fact that for more than eight months, these Filipino seafarers were working on board for a very long time the reason why they want to spend as much time with their families when they go home rather than attend these training courses mandated to them by their principal and our government as well. Therefore it can be said, that if more maritime school and maritime training center will be qualified and be competitive to train seafarers, this will reflect in their performance on board resulting to following specific rules and guideline because of the discipline instilled with them during the course of their schooling and training.

FRAMEWORK

Proposition 1 Seafarers who took their training from substandard Maritime training centers are most likely not to follow standard rules and procedures.

Knowledge is an important factor for making a seafarer confident in doing his job accordingly. Seafaring is a particular part of different industries so people involved in seafaring are submitted to many specific conditions which shape their career and education. Being seafarer implies need for constant improvement and knowledge check. This follows from fact that during navigation there are many risks which affect safety of crew, cargo and ship, so there is a constant need that everybody on ship works as a team. Seafarers are submitted to permanent knowledge and skill check on international labor market. The all above mentioned implies that seafaring requires continuous education, whether the reason is fast development of navigational equipment or the reason is environmental protection. Senior officers need to know how to manage with their crew in dangerous situations that are common. “The most serious problems of seamen's work conditions are noise and vibration. In addition, rough seas may cause both functional and health disturbances. The climatic conditions on board are often poor in both hot and cold climates, and extreme changes in humidity and temperature are possible.” (As cited by Anna-Lilsa Elo, Phl) Without sufficient knowledge from the seafarers, it will make their tasks harder to pursue since they don’t know how to function properly on certain conditions because they don’t know how. Basic interpretation of the size of waves in the ocean, the vibration they feel inside their vessel, and interpretation of other external forces will be hard to perform with
adequate knowledge resulting to not being able to meet the goals and objectives of their top management.

Proposition 2 Seafarers who are not knowledgeable in the performance of their tasks on board are most likely not to follow standard rules and procedures.

Most of the seafarers are very competent in doing their jobs because of their continuous learning through trainings. Their ability of manipulating the machines, tools, engines and other more is a result of their continuous training with different training centers and in-house training of their company. Executing the different processes assigned to them by the company is also a testament on how competent they are as well. Requirements for the certification of masters and mates, and the training to meet these requirements are based on the STCW guidelines promulgated by IMO. These standards are important because they form the foundation for applying marine simulation to marine certification. Allowing students to practice with instantaneous feedback, adjusting the level of difficulty and complexity to accommodate the learner’s capabilities, and giving students exposure to uncommon and high risk events are some of the ways of enhancing the skills of these seafarers. Further, competence is a mixture of technical and social skill and a place where terminology and vocabulary are taken for granted” (Lane 1999). According to Ding & Liang (2005), competence includes knowledge, skills and understanding in terms of communication, with emphasis on issues such as fluency in English. Having defined what they should be able to do educationalists also devise valid and reliable ways to test that students can do what they are supposed to be able to do.

Proposition 3 Seafarers who lack the necessary skills in performing their job are most likely not to follow standard rules and procedures.

Allport (1935) defined an attitude as a mental or neural state of readiness, organized through experience, exerting a directive or dynamic influence on the individual’s response to all objects and situations to which it is related. Working as a team is another characteristic of the seafarers from as they are able to interact with their co-workers. Communication and being flexible is another key attributes of these seafarers as they are able to adjust easily to any nationalities with different culture. It is a trait that endears them to foreign principals because of their culture of friendliness and adaptability to any nationalities. “Gagne included attitudes as a learning outcome, reasoning that attitudes can determine behavior or performance, that there are a variety of mediums devoted to affecting attitudes, and that there is evidence that attitudes can be changed.” (Gagne, 1984, as cited by Kraiger et.al 1993, p. 318) Based on my experience being able to talk with a lot of crewing managers, their foreign principals have tried experimenting of utilizing other nationalities other than Filipinos to handle their vessels probably to cut down on their labor costs. The result is that they tend to go back on choosing Filipino seafarers for having the right attitude towards work. Filipino seafarers do not complain too much compared to other nationalities an attribute that endeared us to many foreign principals.

Proposition 4 Seafarers who has a negative attitude at work are most likely not to follow standard rules and procedures.
4. CONCLUSION (Positivist View)

Good quality training is a prerequisite to ensuring a vessel maintains a high standard of operation. Training in all its forms adds to the value and safety culture on a vessel. From the legally imposed training certificates of competence to the cadet programs of practice at the board of the ship, it is essential to understand the strategic importance of operating a vessel to the highest levels. For crew members aspiring to higher ranks, statutory training is carried out as they seek for promotion, but a good ship operator will have their own in-house training program that will help reinforce the company’s culture and safety. Lack of the elements mentioned above will result to seafarer’s conformance to set standards and rules. This in turn will result to accidents, which in effect will lead to higher costs and low productivity.

When there is a report of non-conformance by seafarers the first point of focus would be that he/she may not have received or undergone proper training. Before going on board, a seafarer is expected to complete and pass necessary requirements and update himself with principles and working concepts that will help him carry-out his tasks effectively and efficiently. And because training is seen as fundamental and critical prior and during actual performance of work at sea, much is expected to the institutions or centers providing the training service. Sub-standard training centers therefore- those whose approach, methods and curriculum are not in compliance with what is mandated by the governing bodies will have a program that is sub-standard. Seafarers therefore who will undergo training in these centers will receive no more than what they offer. And because they did not undergo an effective training program, they are prone to non-conformance to rules, policies and standards on board ship because of lack of understanding and proper awareness. The lack of understanding and awareness connect to a seafarer’s knowledge, skills and attitudes. How do you expect him to conform to policies and standards when he was not educated on what is expected of him on board ship in terms of knowledge, skills and attitudes. Lack of these will definitely result to them not following certain policies because they were not given proper and effective training program that is supposed to provide them with a jumpstart in building their competency prior boarding the ship.

5. ACKNOWLEDGEMENT

This a contribution by the researcher to his beloved Alma Mater, DE LA SALLE UNIVERSITY. Hoping that this paper will serve as future reference for other students of DLSU – GSB or other interested researcher who wants to deepen their understanding on the behaviour of seafarers.

First and Foremost, the researcher would like to thank God, the Father Almighty for all the blessings and graces He has endowed me. For giving him the wisdom, guidance, and endurance especially during the preparation of this paper.

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BATTLE AGAINST SOLID WASTE: CONTRIBUTION OF UNIVERSITY BELT BARANGAYS TOWARDS CLEAN AND DISASTER-PREPARED CITY

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ABSTRACT

Solid waste is one of the major problems in the urban communities due to congestion and improper garbage disposal. This problem may lead to some health and disaster-related issues. University Belt Area (UBA), a congested place in Manila City, Philippines generate tons of solid waste materials daily. Given this condition, it is significant to know the response of the local government units (LGUs) in addressing this type of problem. Thus, this study investigated the solid waste management programs (SWMP) implemented by UBA barangays and its problems encountered in implementing the said programs. The awareness of the residents on SWMP and their suggestions for effective implementation of these programs were also determined. An in-depth interview was conducted among barangay officials. Small group discussion (SGD) was conducted among the selected residents. Thematic analysis was used to interpret the qualitative data while descriptive statistical tools were used to analyze the quantitative data. Findings revealed that programs implemented by ten barangays in UBA are categorized into educational, infrastructure, waste reduction, and regular cleaning activity. These programs are known to most of the residents who participated in the study. In the process of implementation, the LGUs are facing some constraints. These constraints include lack of discipline among the residents, lack of funds, irregular collection of waste materials, location of the barangay, and poor segregation practices. To effectively implement the afore-mentioned programs, the residents suggested some important recommendations. These encompass implementation of the appropriate barangay resolutions, raising public awareness, and imposition of penalties for the violators. Stakeholders should provide strong support for SWM agenda of UBA barangays. Policy makers should consider these data to formulate sound policies which can address the problems on solid waste. The barangay council should review Republic Act 9003 and consider collaboration with Ferris Wheel Project for better implementation of the programs.

Keywords: Barangays; solid waste; solid waste management programs; University Belt Area; urbanized areas
INTRODUCTION

Every day the world is getting more urbanized. The rate of urbanization is increasing at an alarming rate. United Nations Department of Economic and Social Affairs (UNDESA) reported that 34% of the world’s total population in 1960 was living in the urban centers. In 2014, this rate increased to 54% (UNDESA, 2014). This increase in urban population is brought by the natural increase due high fertility rate of the urban population and rapid rural to urban migration (Henderson, 2002). The rapid rate of migration is attributed to the pull factors inherent to the urban environment itself (Mohammed, 2016) like better job opportunities, access to health and educational facilities, and high standard of living.

University Belt (U-Belt) area (Figure 2) in Manila, Philippines (Figure 1) is an area where colleges and universities are concentrated, hence the name implies. This area is the home of more than fifty higher educational institutions. The Central University Belt (CUBE) area is a seat for twenty universities and colleges. As Filipinos put a high regard for quality and responsive education, population over in this place has increased tremendously. This rise in population then is considered as contributing factors in the escalation of the amount of waste materials generated in the urban setting. According to National Solid Waste Management Commission Reports (2015), the estimated the amount of solid waste generated in 2010 in Manila City alone was 2,990,814 metric tons. In 2014, this figure increased to 3,595,593 metric tons. There is however, no specific information that pertains to the case of U-Belt area.

The rise in population in the U-Belt area also resulted to the emergence of additional commercial establishments, dormitories, and other infrastructure development. This infrastructure development resulted to changes in the land use and the increase in the urban surface sealing which increases the amount of surface run-off and decreases the ground water recharge (Haase, 2009). This condition serves as a challenge to the Local Government Units (LGUs) on how to deal with this problem.
The problems on improper waste management and high percentage of impermeable land make U-Belt area highly vulnerable to the devastating effects of flood. High amount of waste materials and improper disposal of these items make people highly prone to the diseases (National Solid Waste Management Commission Reports, 2015). From the prevailing condition of this place, the researchers came up with the framework on the goals of the implementation of solid waste management programs in U-Belt area (Figure 3). The current modified framework focuses on how the dirty, disaster-prone, and disorder U-Belt area can be converted into clean, disaster-prepared and orderly place (Figure2). This framework was modified from the framework of Discipulo (2012) on urban renewal study.

From the existing problems on solid waste management in the U-Belt area, this study investigated the contribution of the U-Belt barangays towards a clean and disaster-prepared city. Specifically, this study determined the solid waste management programs implemented by the barangays around the University Belt, identified the problems encountered by the communities pertaining to the implementation of the programs, determined the awareness of the residents in
the said programs, and identified the suggestions of the residents for effective solid waste management programs implementation. Data obtained from this study is vital in policy making and urban planning of LGUs. This will also agitate the stakeholders to support and participate in the program implementation.

2. Materials and Methods
2.1. Research Design

The research design employed both descriptive and qualitative approaches. Qualitative research aims to interpret meanings, descriptions, and symbols (Braun and Clarke, 2006). The goals of this type of research are to provide answers to the why’s and how’s. On the other hand, descriptive approach was used to describe characteristics of the population being studied (Shields and Rangarajan, 2013). This approach answers the question of “what” in the study.

Objectives 2 and 4 were answered using qualitative approach while objective 3 was answered using descriptive method. Both qualitative and descriptive approaches were used to answer objective 1.

2.2. Research Locale

The study was conducted in the U-Belt area. The name was given to this area because of the high concentration of the colleges and universities in this place. Originally, this name was given only to San Miguel district but technically it includes the nearby districts such as Quiapo, Santa Cruz. This area covers Mendiola Street, Morayta Street (now Nicanor B. Reyes Street), eastern end of Azcarraga Street (now Recto Avenue), Legarda Street, western end of España Boulevard, and the different side streets (Figure 4). This study covers the 10 barangays as given in Table 1.

![Figure 4](http://www.mapcentral.ph/)

2.3. Respondents of the Study
The participants of the study were the 7 chairperson, 3 barangay councilors, and randomly selected residents of the ten barangays in the U-Belt Area. Ten barangay chairpersons and several barangay councilors were asked about the solid waste management programs implemented by their respective barangays and the problems they encountered during the implementation of the said program in an in-depth interview. The councilors interviewed in this study were the heads of the committee on health and sanitation.

Selected residents were asked about their awareness on solid waste management programs of their respective barangays and their recommendations for effective implementation of the said programs during the small-group discussion (SGD).

2.4. Research Instruments
Two research instruments were used to gather the data needed in this study. These instruments were the interview guide questions for in-depth interview and guide questions for small group discussion. The contents of these instruments were validated by the experts in the field of research and solid waste management.

2.5. Data Collection Procedure
In order to gather the data needed for the study, the researchers did an in-depth interview with the barangay chairpersons and barangay councilors, focus-group discussion with the randomly selected residents, and regular observation was also conducted to validate the results. The methods in the in-depth interview and small group discussion were patterned from the suggestions of Yukalang et al. (2017). The items in the questionnaires were based from the ideas of Yukalang et al. (2017) and McAllister (2015).

In-depth interview
An in-depth interview with eight barangay captains, 1 barangay councilor, and 1 barangay secretary was conducted by the researchers to determine the solid waste management programs implemented by the barangays around the U-Belt area and the problems encountered by the communities in the process of implementation of the said programs. The researchers prepared the guide questions for interview ahead of time. The guide questions were validated by the expert in the field of research and environmental issues and concerns. The English version of the guide questions was translated into Tagalog so that the respondents can understand better and they can freely engage in the conversation.

The researchers asked permission to record the conversations from the barangay captains, barangay councilor, and barangay secretary. Field notes were also utilized to record pertinent information during the course of the interview.

Small group discussion
Eight small group discussions were conducted during the duration of the study. The number of participants and date of discussion in the selected barangays in the U-Belt areas during the discussion are reflected in Table 1. The demographic profile of the participants such as age, occupation, and highest educational attainment were noted during the onset of the activity. Each participant was asked regarding his/her awareness about the implemented solid waste management programs in his/her barangay.

Observation
In order to counter-check the information disclosed by the barangay chairpersons and councilors, regular observations were conducted by the researchers. A weekly observation on the implementation of the solid waste management programs and the difficulties associated with the implementation of these programs was done from March to September, 2017.

2.6. Data Analysis Procedure

After the collection of data, the data gathered were analyzed using descriptive statistical tools and thematic analysis. The quantitative data were interpreted using the descriptive statistical tools such as frequency counts and relative frequency. Meanwhile, the qualitative data were analyzed using thematic analysis. In this method, patterns or themes within data were identified, analyzed, and reported (Braun and Clarke, 2006). Patterns across data sets that are important to the description of a phenomenon and are associated to a specific research questions are referred as themes (Daly and Gliksman, 1997). The themes generated from the data were validated by the experts in the field of research and solid waste management.

Table 1. Number of participants and date of discussion during the small group discussion in the selected barangays in the U-Belt areas

<table>
<thead>
<tr>
<th>Small group discussion number</th>
<th>Place of discussion</th>
<th>Number of participants</th>
<th>Date of discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Brgy. 395</td>
<td>6</td>
<td>September 09, 2017</td>
</tr>
<tr>
<td>2</td>
<td>Brgy. 395</td>
<td>4</td>
<td>September 09, 2017</td>
</tr>
<tr>
<td>3</td>
<td>Brgy. 396</td>
<td>3</td>
<td>September 09, 2017</td>
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<td>Brgy. 396</td>
<td>4</td>
<td>September 09, 2017</td>
</tr>
<tr>
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<td>Brgy. 397</td>
<td>4</td>
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</tr>
<tr>
<td>6</td>
<td>Brgy. 404</td>
<td>5</td>
<td>September 15, 2017</td>
</tr>
<tr>
<td>7</td>
<td>Brgy. 404</td>
<td>5</td>
<td>September 15, 2017</td>
</tr>
<tr>
<td>8</td>
<td>Brgy. 403</td>
<td>4</td>
<td>September 18, 2017</td>
</tr>
</tbody>
</table>

3. Results and Discussions
3.1. Solid Waste Management Programs in the U-Belt Areas
Figure 5. Categories of the Programs on Solid Waste Management in the University Belt Areas

Results of the in-depth interview indicated that the programs implemented by ten barangays in the U-Belt areas are categorized into educational, infrastructure, waste reduction, and regular cleaning activity (Figure 5). Under educational programs, barangays implemented waste segregation campaign and information campaign. Also, they strictly imposed the “No segregation, No Collection Policy.” They also conducted the massive information campaign about proper ways of segregating of the waste materials as mandated by Republic Act 9003.

Barangays are actively allotting budget for infrastructure which will counter the disaster which may be brought about by improper solid management. They have been allocating budget for repairing drainage system and constructing material recovery facilities. Material recovery facility serves as an area to store non-biodegradable materials prior to disposal.

In terms of waste reduction, barangays are now passionate in campaigning for the recycling activities. They encourage their residents to turn waste materials to raw materials for producing valuable products like lanterns and decorative stuffs. Regular cleaning activity, such as regular clean-up drive and street sweeping has been practiced by the local government units (LGUs) as a support to the solid management programs.

The specific programs implemented ten barangays in the U-Belt areas is indicated in table 2. Findings showed that out of ten barangays, seven of them, excluding barangays 395, 398 and 401 are currently implementing the clean-up drive program in their areas. Interestingly, ten barangays practice waste segregation program (Figure 6a). In addition, it was also revealed that barangays 395, 396, 398 and 402 are implementing the Materials Recovery Facility (MRF) program (Figure 6b). Moreover, the results showed that barangays 395, 396, 397, 399 and 400 are active in implementing the information campaign program concerning the battle against solid waste. Barangay 400 is the sole barangay which is regularly doing drainage maintenance (Figure 6c). Findings also showed that all the barangays in the U-Belt are currently implementing a daily street sweeping activity (Figure 6d) in their barangays. Barangays 400 and 402 are the only barangays which are implementing the recycling activities in the University Belt (Figure 6e and Figure 6f).

Over the years rapid urbanization is taking place in Manila City, Philippines. This phenomenon was due to economic and social reasons. Consequently, the amount of waste materials generated also increases. Bernardo (2008) showed that the households in the city generated an average of 3.2 Kg of solid waste per day, or 0.50 Kg/capita/day. In 2010, the estimated amount of solid waste generated in Manila was 2,990,814 metric tons and it increased to 3,595, 593 metric in 2014 (National Solid Waste Management Commission Reports, 2015). The existence of the different programs on solid waste management in ten barangays in the U-Belt area are the response of the various communities to the alarming problems associated with the elevating amount of solid waste generated in the congested communities. These programs are the manifestations that these barangays are abiding to the important provisions.
stipulated in Republic Act 9003, otherwise known as the “Philippine Ecological Solid Waste Management Act of 2000.
Figure 6. Solid Waste Management Programs in the U-Belt Area as Observed by the Researchers: a.) Using Bins for Waste Segregation b.) Material Recovery Facility for Storing Recycled Products c.) Drainage Repair and Maintenance (Source: http://opinion.inquirer.net/91905/easing-manila-traffic-congestion) d.) Regular Street Sweeping Activity e.) Using Plastic Bottles for Planting Vegetables f.) Lantern Made from the Solid Waste Materials

Table 2. Specific solid management programs implemented by each barangay in the University Belt Area, Manila, Philippines

<table>
<thead>
<tr>
<th>Barangay</th>
<th>PROGRAMS</th>
<th>Relative Frequency</th>
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<tbody>
<tr>
<td></td>
<td>Clean-up Drive</td>
<td>Waste Segregation Campaign</td>
</tr>
<tr>
<td>395</td>
<td>✔</td>
<td>✔</td>
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<td>396</td>
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<tr>
<td>404</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>N = 10</td>
<td>60%</td>
<td>100%</td>
</tr>
</tbody>
</table>

3.2. Awareness of the Residents on Solid Waste Management Programs
During the SGD, all participants were asked about their awareness on the programs implemented by the barangays in the U-Belt area on solid waste management. Findings of the investigation showed that 89% (31) of the participants are aware about the programs while 11% (4) participants are unaware (Figure 7). Generally, the results manifest that most of them have an idea about the implementation of the aforementioned programs. Awareness of the people about the programs is the outcome of the massive information drive and visibility of the infrastructure projects of the local government units.

Figure 7. Distribution of awareness of the selected residents about programs on solid waste management in the University Belt Area

The high percentage of awareness on solid waste management programs among the residents in the U-Belt barangays is an indication that people are vigilant and participative in the programs and projects of the communities. Their participation ranges from attending the general assembly of the barangays up to abiding the proper segregation policy. On the hand, there are residents that remain not aware about the programs and policies of the barangays on solid waste management. Perhaps, they are not watchful regarding what is going to their communities and at the same time they are not participative to the activities of their barangays.

3.3. Constraints on Solid Waste Management

Constraints encountered in the course of the implementation of every project and program makes the implementation itself very challenging. The problems encountered by the barangays in the U-belt areas in the implementation of the solid waste management programs are given in Figure 8. Findings showed that all ten barangays are currently facing the problem on the lack of discipline among the residents. They throw their garbage anywhere. They are particular of the designated places for their waste materials.

Barangay 399 and Barangay 404 consider deficiency of funds as a major problem in the implementation of the program on solid waste management. Furthermore, it is also indicated above that 7 out of 10 barangays except for barangays 399, 402 and 403 are experiencing problem in terms of irregular collection of wastes. Findings also show that the barangays 395 and 397 are facing a problem on their location, which causes these barangays to produce more solid waste materials.
The constraints experienced by the U-Belt barangays in connection with the implementation of solid waste management programs in their communities are typical issues observed also in the other urbanized cities in the Philippines. For instance, Reyes and Arturo (2013) observed several problems encountered by the community people in the implementation of solid waste management practices in the different barangays in Batangas City, Philippines. In their study, they found that the increasing population, inadequate government policies, public indifference (public don’t care), inefficient collection of garbage, rapid urbanization, non-operation of a good disposal facility, irresponsible government officials, lack of awareness among the people regarding the effects of solid waste management practices to their health and the environment, and lack of training on proper solid waste management practice are major barriers in implementing effective and efficient solid waste management programs.

In the developing countries however, there are constraints associated with solid waste management implementation. These constraints are categorized into culture, education, and microeconomics; infrastructure and technology; and policy, institutions, and macroeconomics (McAllister, 2015). In terms of culture, education, and microeconomics, the major constraints comprise the attitude and behavior gap of the people and lack of campaign on education and awareness. Major constraints under infrastructure and technology include budgetary constraints, inadequate service and operational inefficiencies, ineffective technologies and equipment inadequacy, lack of landfill disposal, and limited utilization of waste reduction activities. Under policy, institutions, and macroeconomics, the major constraints encompass lack of policy, poor enforcement and responsibility, and lack of monitoring and regulation.

3.4 Recommendations of the Residents for Effective Implementation of Solid Waste Programs

Some of the programs on solid waste management are not effectively implemented due to the political, educational, and socio-economic reasons. During the focus group discussion, the residents suggested some recommendations to the barangay officials for effective and efficient implementation of the solid waste management programs in the U-Belt Areas. These include implementation of the appropriate barangay resolutions, raising public awareness, and imposition of penalties for the violators.
Implementation of the Appropriate Barangay Resolutions

One of the best strategies in order to ensure the effective implementation of the solid waste programs is to pass the appropriate barangay resolutions. The residents said that the existing resolutions are not enough to support the implementation of the aforementioned programs. Hence, the barangay council needs to pass some additional resolutions aside from “No Segregation; No Collection Policy.” These resolutions once passed should be disseminated to the general public. According to the respondents, in order for the residents to become fully aware of these resolutions, the council should ensure maximum attendance of the residents during the barangay assembly.

In the era of rapid urbanization in the cities of the third world countries (e.g. Manila), appropriate policies should be implemented to address the problems associated with high urbanization growth (Hope, 1986). In the case of the barangays in the U-Belt Areas, in order make solid waste management programs effective the policies and resolutions that may focus on allotting budget for the implementation of the programs, improving the linkages to the non-governmental organizations (NGOs), private sectors, and cause-oriented groups and proper spatial planning.

**Figure 8. Problems encountered by the barangays in the U-belt areas in the implementation of the solid waste management programs**

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Figure 9. Residents’ Recommendations for Dynamic Solid Waste Management Program Implementation

Raising Public Awareness

The success of the programs and projects on solid waste management strongly depends on the support of the stakeholders and the general public. The participation of these groups of people can be maximized if they have been properly informed. As revealed by the residents, the barangay should boost the awareness of the people through educational campaign and massive public information dissemination drive. The campaign for solid waste management programs in the U-Belt area can be disseminated well through posting in the bill boards and other public places. Campaign can be done during the barangay assembly; hence, the barangay officials should ensure the maximum attendance of the residents. Cultural and literary programs through songs and poetry can also be explored in order to boost the awareness of the people thriving in the U-Belt Area.

Imposition of Penalties for the Violators

According to the participants in the SGD, there is a need to impose penalties to the violators in order to make implementation of the solid waste management more effective. Violators, in the context of this study; refers to the residents who are not abiding with the policies and resolutions about management of solid waste. For instance, these people don’t dump their garbage materials in the right bins and throw their waste materials in bodies of water.
Those who are doing such should be penalized by the barangay councils. The penalty could be letting them engage on community service or pay offenders can pay a certain amount of money. Community service, on the other hand, could include cleaning the public places such as plaza, streets, and bodies of water and repairing of the drainage system. Imposing these types of penalties will create a culture of discipline and support among the residents.

The success of the implementation of solid waste management can be attributed to three major factors. These factors include people's orientation and strong political leadership, strong collaboration among the different sectors of the community, mass information, education, and communication campaign, and linkage and networking with different agencies and organizations (Atienza, 2008a; Atienza2008b). McAllister (2015) considered potential interventions in order to implement solid waste management programs effectively and efficiently. These interventions include intensified education and awareness campaign, enhancement of public participation, promotion of the incentive scheme, improvements in service operations, improvements in the accessibility of the technologies, utilization of the recycling initiatives, improvements in disposal system, creation of landfill, enhancement in the funding management, and proper enactment and enforcement of the policies and programs.

**CONCLUSION**

The programs implemented by ten barangays in the U-Belt areas are categorized into educational, infrastructure, waste reduction, and regular cleaning activity. These programs are known to most residents of the area. In the process of implementation, the LGUs are facing some constraints. These constraints are: lack of discipline of among the residents; lack of funds; irregular collection of waste; location of the barangay; and lack of segregation. To effectively implement the aforementioned programs, the residents suggested some important recommendations. These include implementation of the appropriate barangay resolutions, raising public awareness, and imposition of penalties for the violators.

Furthermore, the concept of eco-city (Register, 2002; Huang et al., 2010) should be integrated by the U-Belt barangays in their campaign for effective solid waste management programs. The idea of composting (Atega et al., 2017) in the urban setting like enzyme-enhanced composting and vermicomposting (Fantonalgo and Salubre, 2017) should also be considered for the aforementioned program.

For the future research endeavour, more number of respondents should be considered. Hence, the entire University Belt area should be covered in the succeeding research activity.

From the major findings acquired in this study, the authors came up with the extension program of SHS Department of UE Manila known as “FERRIS WHEEL PROJECT” (Figure10). It is a holistic, multi-sectoral, and multi-disciplinary project which aims to further raise the awareness of all sectors in the U-Belt community about problems associated with solid waste management. These sectors include business, youth, local government unit, academe, and people with disabilities.
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INSIGHTS FROM POPE FRANCIS’ LAUDATO SI: TOWARDS ECOLOGICAL CITIZENSHIP FOR A BETTER WORLD

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ABSTRACT

Pope Francis published his second encyclical entitled Laudato Si: Praise be to you - On Care for Our Common Home on the 24th of May 2015. In the encyclical “he critiques unbridled consumerism and inauthentic human and economic development, laments environmental degradation and global warming, and calls everyone to take swift and unified global action” (Pullella, 2015).

We have seen that with unbridled economic progress at the expense of the environment; technological advancements at the expense of human rights and authentic human development; problems with pollution and destruction and even the depletion of our human and cultural resources, we are now reaping the seeds of our overuse and misuse of these natural and God-given gifts.

There is a lot of urgency in this call for immediate action and thus this paper would like to delve deeper into the rich insights from Pope Francis’s latest encyclical on the care of the environment by making a profound philosophical and humanistic reflection on our individual and collective actions. It is rethinking our old and dangerous ways about the world; and the way we do things in society that bring about so much abuse and destruction and thus a new perspective, a new breath of insight about how we are to approach life – an Ecological Citizenship as proposed by Pope Francis that will help in shaping a better world.

Keywords: Better World; Ecological Citizenship; Environment; Laudato Si; Pope Francis

1. INTRODUCTION

Laudato Si: On Care for Our Common Home is the second encyclical of Pope Francis composed of 183 pages in PDF Format. It is the only social encyclical with a vernacular title, that is, Italian, since all the others are in Latin. It is inspired from the song of Saint Francis of Assisi about the environment, praising the Creator for everything. It is not a heavy read; in fact, if you have the luxury of time, like a not so busy Sunday, you can read it within the day, from morning to evening, with little breaks in between. You will understand that Pope Francis has a very compassionate and knowledgeable approach towards issues and concerns. We can see a glimpse of his deep knowledge and understanding of the natural sciences, and how he is able make religion and science have a meaningful dialogue.

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The main theme of this encyclical is on care or stewardship of creation, though the encyclical did touch upon other major themes or principles of the Social Teachings. We can see that there is both old and new reiterations in this document since in a great way it is a reiteration or an explication of the Social Teachings but with a modern twist, albeit a very scientific, ecological one.

When one reads the encyclical, one can sense and feel there is urgency in his words. He is addressing this encyclical to all races, creeds and backgrounds because the act or work for the care of creation cannot be delayed nor side tracked any longer. There is a need to act, and not just to act but to act fast before it is too late. There is both a need to act individually and also collectively. In fact, there is a growing circle of experts who says that the onslaught of climate change is already here and it cannot be stopped. We are all experiencing it right now. Yet we can only be hopeful that something can still be done.

With the prevalence of unimaginable storms that are catastrophic causing havoc and destroying everything in its path, we cannot deny the fact and reality of climate change. There are those who continue to deny its existence and that it is just a means to frighten people for some sinister propaganda or to protect the interests of the very few for world renown and domination. They say that climate change is just a hoax and that we should not be troubled at all. Some world leaders are not at all alarmed and would not even consider signing the Paris Climate Accord by denying that greenhouse gas emissions should be reduced.

Pope Francis mentions that “Doomsday predictions [or end of the world scenarios] can no longer be met with irony or disdain… We may well be leaving to coming generations debris, desolation and filth” (Francis, 2015). If one browses through the internet one will notice that there is much hype in some science fiction circles about “doomsday or the end of the world” scenarios. There are conspiracy theories that the world will end this 2017 because some rock or meteor will hit the earth that will cause great destruction, so great that it will be of catastrophic proportions likened to that which killed the dinosaurs. This is not new; we have been hearing this since the last couple of decades. But the end of the world or doomsday is very real and not unimaginable with the real threat of destruction of the world; of man’s inhumanity to man and for that matter his gradual destruction of his environment. We need not wait for meteors or cataclysmic events to destroy the world before we start appreciating what is given to us, we already have these elements here with us, there is so much pollution everywhere making ecological destruction a reality that will consequently lead to total annihilation – the end of the world.

Indeed, public policy should go hand in hand with both individual and collective action yet, this paper may seek to first focus on how one can imbibe what Pope Francis calls “ecological citizenship”.

2. METHODS

The main method that will be employed in this study is that of philosophical reflection and exposition using sources from and through the encyclical Laudato Si. Important quotations are culled directly from the encyclical that will very much help in the explication of how it is very
important to develop ways and means to both act individually and collectively when it comes to the environment.

This research proposes a modern citizenship, that we are not just citizens of our country but citizens of the world. We have to rethink our old ways and yet this articulation is borne from the fusion of old and new likened to the intimate thread of tradition and innovation that will help give rise to great developments. If we could only be global with our mind-set, we would forever hold on to the fact that we are not just mere beings to ourselves but that we belong to the human family and not just that, in a special way we are part of creation and like the other creatures we tend to the fulfilment of our inmost calling and vocation.

This work proposes a new impetus of doing what we are supposed to do for the benefit for one and all. It is an impetus that moves us and beckons us to act and to do something or to advocate for something that we hold dear to our hearts. Indeed, behind every advocacy and fight for a societal issue is a so-called philosophy of life or rationale of living” (Francis, 2015).

3. RESULTS AND DISCUSSION

3.1 Interconnectedness and Integral Ecology

“Destroy creation and creation will destroy you” (Francis, 2015) is a powerful reminder of how everything is interconnected. There should be a holistic way of seeing this advocacy and stewardship of creation. “There is a loving awareness that we are not disconnected from the rest of creatures, but joined in a splendid universal communion” (Francis, 2015). Everything is important and everything has to be given due concern and attention. He speaks of an “Integral Ecology taking time to recover a serene harmony with creation, [the need to reflect] on our [present] lifestyle and our ideals, and contemplating the Creator who lives among us and surrounds us, whose presence “must not be contrived but found, uncovered” (Francis, 2015).

“Climate change is perhaps the defining issue of our time, yet its extent and impacts are called into doubt as we struggle to understand and accept climate science and agree on how to reduce emissions in order to deal with this looming global environmental crisis” (Healey, 2014). “The deterioration of nature is closely connected to the culture which shapes human coexistence” (Francis, 2015). This goes to show that the problem we face is rooted in culture, a way of living life itself. We have grown so much used to it that it has become second nature to us. It is likened to being acclimatized to pollution that we are not bothered by it anymore. We see so many people suffering around us and even those who are dying or getting killed but we are not bothered by them at all. We have become callous to the core of our inmost being.

Our view should not be compartmentalized, according to Pope Francis. There is dualism, as if we cannot reconcile one with the other “[There] is a relationship existing between nature and the society which lives in it” (Francis, 2015). It is not just society living in nature or people in the world. “Nature cannot be regarded as something separate from ourselves or as a mere setting in which we live. We are part of nature, included in it and thus in constant interaction with it” (Francis, 2015).
Since everything is connected, let us train our eyes to the plight of the poor and the marginalized. “[There is an] intimate relationship between the poor and the fragility of the planet”. [There is] the conviction that everything in the world is connected” (Francis, 2015). We should be bothered, and it should disturb us that we may be fighting for the plight of nature and the environment and yet we do not mind the poor, much less the refugee or the so-called “scum of the earth” (Francis, 2015) – the rejects of society. Concern for the environment needs to be joined to a sincere love for our fellow human beings and an unwavering commitment to resolving the problems of society.

The fight for integral ecology takes into account the fight for not only the poor but the so-called, “least, lost, and the last”, from that of the human embryo or the rejects of society, even drug addicts and criminals; all of them have a right to life and a right to a fair trial, and a right to be punished in view of correcting and reforming them.

“When we fail to acknowledge as part of reality the worth of a poor person, a human embryo, a person with disabilities it becomes difficult to hear the cry of nature itself; everything is connected. Once the human being declares independence from reality and behaves with absolute dominion, the very foundations of our life begin to crumble, for “instead of carrying out his role as a co-operator with God in the work of creation, man sets himself up in place of God and thus ends up provoking a rebellion on the part of nature”. (Francis, 2015)

An integral ecology is inseparable from the notion of the common good, a central and unifying principle of social ethics. The common good is “the sum of those conditions of social life which allow social groups and their individual members relatively thorough and ready access to their own fulfilment” (Paul VI, 1965).

One of this so-called “common goods” is the climate: The climate is a common good, belonging to all and meant for all. At the global level, it is a complex system linked to many of the essential conditions for human life. A very solid scientific consensus indicates that we are presently witnessing a disturbing warming of the climatic system. A good climate is beneficial for every living creature and thus is by right what all creation should have a share therefore. Anything that endangers and ever destroys the balance tramples also the common good” (Francis, 2015).

How about population growth? Is there really a great need to reduce the population? Pope Francis recognizes that “demographic growth is fully compatible with an integral and shared development”. That is why for population experts or demographers there is an optimal or good birth rate that will ensure population stability. 2.1% birth rate is important to maintain this population stability” (Torrevillas, 2013). “To blame population growth instead of extreme and selective consumerism on the part of some, is one way of refusing to face the issues” (Francis, 2015).

3.2 Integral and Solidary Humanism
Humanism is good as long as it is checked and of the well-balanced type. But it has to be integral and solidary. A humanism that is at the extremes can be very counterintuitive and dangerous to civilization and human flourishing. We have to consider the whole human person, body-soul, mind-heart and that there is no dualism or leaning to one side. Secondly, it is very much in solidarity with the whole human family, it is against the individualism that is contrary to the spirit of global citizenship.

“Today, the analysis of environmental problems cannot be separated from the analysis of human, family, work-related and urban contexts nor from how individuals relate to themselves, which leads in turn to how they relate to others and to the environment. There is an interrelation between ecosystems and between the various spheres of social interaction, demonstrating yet again that “the whole is greater than the part”. If everything is related, then the health of a society’s institutions has consequences for the environment and the quality of human life. “Every violation of solidarity and civic friendship harms the environment” (Francis, 2015).

3.3 Promotion of the values of Patience, Contemplative Silence and Peaceful Living

We need to develop and imbibe the many values that are not only good for human flourishing but also for the good of the whole of creation because they make us more attuned to the sublime, to the things that we cannot see and fully fathom; the mysterious ways of nature.

“The continued acceleration of changes affecting humanity and the planet is coupled today with a more intensified pace of life and work which might be called ‘rapidification’” (Francis, 2015). We can see how this is very true today. With the rush-hour in our urban centres and cities we see that everyone is rushing and everyone is in a hurry. There is also that need to speed up things not just the means of production and development but even life itself.

Although change is part of the working of complex systems, the speed with which human activity has developed contrasts with the naturally slow pace of biological evolution. Moreover, the goals of this rapid and constant change are not necessarily geared to the common good or to integral and sustainable human development. “Change is something desirable, yet it becomes a source of anxiety when it causes harm to the world and to the quality of life of much of humanity” (Francis, 2015). It is a heavy price to pay all for the sake of insatiable love for economic and infrastructure growth.

There is a need to slow down, even if necessary to stop for a while to enjoy the surroundings. That is why this contemplative silence says it all: “you say it best, when you say nothing at all”. Indeed, we are called quietly to imitate heroes and epitomes of generosity in self-sacrifice and good works.

Finally, the value of peaceful coexistence and rightful living: “No one can cultivate a sober and satisfying life without being at peace with him or herself” (Francis, 2015). An adequate understanding of human flourishing consists in fulfilling what we mean by peace, which is not just the absence of war or conflict but justice and authentic human development throughout the
world. Inner peace is closely related to care for ecology and for the common good because, lived out authentically, it is reflected in a balanced lifestyle together with a capacity for wonder which takes us to a deeper understanding of life” (Francis, 2017).

3.4 Importance of Contemplative Rest: Towards Appreciation of Nature as a Work of Art

“We are called to include in our work a dimension of receptivity and gratuity, which is quite different from mere inactivity” (Francis, 2015). Rest is needed. If we have six days devoted for work why not devote a day for worship, prayer and contemplative rest. We rest not just because we are tired but that it helps us to refocus ourselves, recollect our thoughts to see where we are being led. We have to rest and bless creation like God the Creator because we are co-sharers in His work of creation - we cooperate in the creative powers of God. We are to rest and we need to allow the earth to rest after sowing and reaping its abundant fruits. Thus, there is wisdom in the so-called “fallowing of soil”, that is, to give rest or pause in a natural cycle of crop rotation, to regain the lost minerals and nutrients exhausted by tilling, sowing and reaping.

Lastly, there is purpose in art galleries using the signs “Hands Off”, “Do not touch”. If we can consider nature as a work of art – a work of art of the Creator then we will try our best to take care of it, not to touch it, so that others, specially the future generation may also enjoy and appreciate its many gifts and blessings.

3.5 Purposeful Living

There is meaning in life and there is a purpose to it that is why there is no randomness. There is meaning and purpose in everything that is done and it is a matter of digging deep into the vicissitudes of life that one gets to have a glimpse of the divine or spiritual. Again, there is a holistic way of seeing and regarding everything around us. That everything is interconnected in one way or another and that there is no such thing as randomness. There is both purposefulness and meaning to life and it is not mere chance or fatalism that this happens. It is true that God does not play dice but He does permit human creativity and free will to be oneself and to be fulfilled.

Those who purport “relativism” bespeak a certain glorification of randomness. Pope Francis says of this that “practical relativism typical of our age is “even more dangerous than doctrinal relativism” (Francis, 2015). This culture of relativism is the same disorder which drives one person to take advantage of another, to treat others as mere objects, imposing forced labour on them or enslaving them to pay their debts” (Francis, 2015).

3.6 Living simply so others may simply live

“Humanity is called to recognize the need for changes of lifestyle, production and consumption, in order to combat this warming or at least the human causes which produce or aggravate it” (Francis, 2015). The quotation above was attributed to Mahatma Gandhi who lived a very simple life - a life of sacrifice and frugality.
Contrary to a simple life is this “throwaway culture” which sees things as all trash to be discarded rather than that which can be reused, reduced and recycled. These problems are closely linked to a throwaway culture which affects the excluded just as it quickly reduces things to rubbish. If only we can try to save what we can and let not things go to waste there will be more needy people who will benefit with the surplus of our supplies because if the supply of basic commodities in the market remain high, demand will be low and so prices will remain low. More people will be able to buy what they need with the money they have.

There is “rampant individualism”, and many problems of society are connected with today’s self-centered culture of instant gratification. This advocacy for the environment “proposes a growth marked by moderation and the capacity to be happy with little”. It can be a form of minimalism. To live simply so that others may simply live. “It is a return to that simplicity which allows us to stop and appreciate the small things, to be grateful for the opportunities which life affords us, to be spiritually detached from what we possess, and not to succumb to sadness for what we lack” (Francis, 2015). It would be very beneficial for one and all if we try to move more and more towards minimalism with our day-to-day living. More and more things and possessions make life complicated and cumbersome. There are so many things in our homes that are not really essential and can even pose great danger when disasters like earthquakes and fire hit.

Another very interesting activity useful for this discussion is the so-called “Earth Hour”. It is an occasion around the globe “where millions of people, businesses, and landmarks set aside an hour to host events, switch off their lights, and make noise for climate change action”. Seemingly, this worldwide activity shows us and the whole world that with both individual and collective concerted effort we can work towards lessening our “carbon footprint”. If we can take small steps and soon big sacrifices by not wasting and saving energy; and other resources it will indeed really go a long way in the worldwide efforts of climate change mitigation.

3.7 Ecological Education

Pope Francis speaks of “Ecological Education”, which is basically an education that bespeaks a promotion of the environment. “Good education plants seeds when we are young, and these continue to bear fruit throughout life” (Francis, 2015). He stresses “the great importance of the family”, which is ‘the place in which life is seen as a gift from God’. “The family has to be welcomed and protected against the many attacks to which it is exposed, and can develop in accordance with what constitutes authentic human growth. In the face of the so-called culture of death, the family is the heart of the culture of life” (Francis, 2015).

Ecological Education should be instilled in both young and old for it leads to a profound reality: “the relationship between human life and the moral law, which is inscribed in our nature and is necessary for the creation of a more dignified environment” (Francis, 2015). Pope Benedict XVI spoke of an “ecology of man”, based on the fact that “man too has a nature that he must respect and that he cannot manipulate at will” (Benedict XVI, 2011). It is enough to recognize that our body itself establishes us in a direct relationship with the environment and with other living beings. The acceptance of our bodies as God’s gift is
vital for welcoming and accepting the entire world as a gift from the Father and our common home" (Francis, 2015).

3.8 Ecological Citizenship for a Better World

Ecological Education, aimed at creating an “ecological citizenship”, is at times limited to providing information, and fails to instil good habits.

“The existence of laws and regulations is insufficient in the long run to curb bad conduct, even when effective means of enforcement are present. If the laws are to bring about significant, long-lasting effects, the majority of the members of society must be adequately motivated to accept them, and personally transformed to respond. Only by cultivating sound virtues will people be able to make a selfless ecological commitment” (Francis, 2015).

Thus, we have to develop the mentioned individual and collective steps and actions that will lead to a new way of seeing and living our existence today. We have to think globally and not just fight for our nation’s self-vested interests and have it always at the forefront of everything we do even at the great expense of the smaller and poorer nations. This is a very radical way of looking at the way we see ourselves because it means that we have to let go not just egocentrism but even ethnocentrism, and live as members of one human family. In fact, we are all connected in one way or another, through the inbreeding, mix marriages and extended family relations which cut across ethnicities, religions, cultures and economic backgrounds.

4. CONCLUSION

We cannot close our eyes to what is happening in the world. Every nation and every person is in one way or another reaping the fruits of misuse and abuse of our world. Climate change is real and it has caused the so many extreme weather conditions that have brought about so much destruction leading to the loss of lives and property. The loss also includes both environmental and cultural patrimonies and heritages that would forever be amiss with the next generation, causing so much pain and hurt. Researchers, scientists, environmentalists, policy-makers and world leaders alike and so many others are working double-time to try to reverse the trend and maybe slow down the degradation, yet there are those who say that these efforts would all just be useless. We beg to disagree and are still full of hope that these efforts will not be in vain. We can still do it and succeed in our quest or mission to changing the tide. We have to just try; there is no harm in trying even if it is to suggest new ways of thinking and new ways of doing things. It can start with the promotion of a mindset that is of integral ecology leading to imbibing certain behaviours or actions that will be good to each and every creation whether be creatures or surroundings alike. All of these hopefully will contribute to what is called “ecological citizenship” that will ultimately lead to shaping a better world.

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FACTORS INFLUENCING EMPLOYEES’ LONG-TERM COMMITMENT TO THE WORKPLACE

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ABSTRACT

These days numerous changes are prompting problems and difficulties at individual level as well as in relation to the company. An employee will easily switch to another company for so many reasons, such as higher salary, job dissatisfaction, unfulfilled needs, etc. This is highly disadvantageous for the company since long term employees generally have willingness to sacrifice for the company. The factors influencing the employees’ long-term commitment to the company are what will be discovered through this research. Factors observed in this research are education, job tenure, salary, satisfaction, loyalty, needs comprises of physiological, safety, love, esteem, and self-actualization need. Samples are obtained by purposive sampling in a company in Jakarta. Method used is Classification Tree. The most influencing factor for employee’s long-term commitment to the workplace is loyalty. Employees with high level of loyalty will have higher long-term commitment to their workplace.

Keywords: Commitment to stay in the workplace, loyalty level, satisfaction level, Maslow’s Need, Classification Tree

BACKGROUND

Switching employees to other companies is a common occurrence now. The need for a more decent life triggers the desire of employees to earn a greater income. This resulted employees choosing to move to another company that gives more salary to them. In addition to larger salary issues, the switching of employees to other companies can be caused by other variables such as their satisfaction at work in the company, their unmet needs include physical needs, security needs, need of love, the lack of self-esteem and also the lack of self-actualization. All these needs are summarized from the level of needs described by Maslow.

In addition, the work commitment of an employees in a company may be influenced by their education. The possibility of employees who do not have a high education will tend to stay in in the company because of the difficulties of finding another job. In addition, the variable length of work in a company (tenure) will also affect the level of commitment of employees to stay in the company. Employees who just worked for a company may be more likely to move easily because of the opening of many other vacancies that are more profitable to them. Employees who have long worked in a company usually more defensive because their salary is more stable, the work to be done is a common thing they do, colleagues who are getting familiar and so forth. Thus if there are no other more important thing they can achieve, they will choose to work in their old workplace.
For the company, switching employees is a disadvantage. The employees have gained knowledge from the old company and after they have enough experience and knowledge to do from their old workplace, many other companies offer opportunities for these employees with a higher salary. The new companies will get a more experienced employees. Unfortunately young people in this millennia era often consider the new job to be taken only from the amount of the salary they will receive. It makes the old company loose profitable employees. Therefore to retain their employees, companies usually try to raise the employees’ salaries.

From experience it appears that employees who are not easy to move from their workplace is the employees who have high loyalty. Employee’s loyalty is the willingness of the employee to sacrifice for the company where he works. Employee’s loyalty can be one of the hallmarks of the employee’s commitment to the company. Employees with a high level of loyalty will usually have a higher level of commitment than employees who have low loyalty. Therefore, to increase the employees’ commitment, a company can look at the employees’ loyalty level and try to increase it.

A company, definitely want to retain employees who profitable for the company. For that purpose many considerations and policies must be considered. To be able to take a good policy to retain employees, a company needs to know what variables that affect the commitment of an employee to stay in the company and know the profile of employees who have a high or low level of commitment based on these variables. That's why this research is done.

Problems:
1. What are the variable that most influence the level of commitment of employee to stay in the company
2. What are the other variables that also affect the employee’s commitment level to stay in the company
3. How to find the employee’s profiles with high and low commitment level to stay in the company based on the variables found above

Objectives:
1. Looking for variable that most influence the level of commitment of employee to stay in the company
2. Look for other variables that also affect the level of commitment of employee to stay in the company
3. Looking for employee’s profiles with a high and low commitment level based on these variables above

Scope of problem:
This research have just been analyzed using data from a company in Jakarta

RESEARCH VARIABLES

The variables that will be involved in this research are:
1. The level of employee’s commitment to stay in the company: the level of employee’s commitment to stay in the company where he works. This level of commitment is measured by a Likert Scale 1 to 5 using 10 statement items that reflect the tendency of the employee to move to another company. The commitment level score will be categorized into low and high categories
2. Employee’s loyalty level: the willingness of employee to sacrifice for the company such as willingness to work overtime without overtime payment, willingness to involve in various
activities and so on. The loyalty level is measured by a Likert Scale 1-5 using 8 statement items. Loyalty level score will be categorized into low and high categories.

3. Satisfaction level: employee’s satisfaction here covers satisfaction to the salary, work facilities, workload, coworkers and also the relationship with the leader. Satisfaction is measured on a Likert Scale 1-5 using 12 statements that reflect employee’s satisfaction in the company. The satisfaction level score will be categorized into low and high categories.

4. Need: is the perceived need of employees. The needs measured in this study covered physical needs such as food, water; the need for job securities, the need for self-affection, the need for appreciation and the need for opportunities and places to actualize themselves. This requirement is the level of needs expressed by Maslow’s hierarchical level of Need. This variable Need is measured by Likert Scale 1-5 using 25 statements.

5. Gender is the gender of respondents consisting of two categories namely man and female.

6. Education: the level of the last level of education that is finished by the employee. Education consists of six categories that are smaller or equal to SMA, D3, S1, S2, S3 and others.

7. Tenure: the period from the time the employee worked in the company until the time the survey was conducted. The length of work consists of four categories: less than one year, between one to five years, five years to ten years and greater or equal to ten years. In the data analysis this variable will categorized into two categories.

8. Salary: net salary received from the company per-month. In this study the salary of employee is divided into two categories that is less than five million rupiah and more or equal to five million rupiah.

**RESEARCH METHOD**

Population: Employees at ABC company
Sample: 109 employees at ABC Company who works at ABC Jakarta’s branch
Sampling Techniques: Purposive Sampling
Method for Data Analysis is Classification Regression Tree (CRT)

Classification Regression Tree
Classification Regression Tree (CRT) is a nonparametric statistical method used to describe the relationship between a response variable with one or more predictor variables in the form of a tree. If the response variable is a continuous variable then regression trees will be generated. Meanwhile, if the response variable is a categorical variable, it will generate a classification tree. In this study all variables used are categorical variables with two categories.

The tree will consist of a parent node that will split into two child nodes based on categorical variables as predictor variable. The child node can split down again into another child nodes based on another predictor variables. In this case the child node can become the parent node at the level (call it a branch) in the next split. The splitting process will stop after reaching certain limits. This limit is determined by the policy of the researcher including the member of a parent node or child node and the number of the branches. If the restriction has been fulfilled then the splitting of the parent node into the child node will stop. The limits of many respondents in a parent node and child node and how many branches needed are determined by the researchers based on the number of respondents in the sample and based on the objectives in the study.

According to Agung Waluyo (Media Statistics, Vol.7, No. 2, December 2014, Page 97-98), CRT technique creating a classification trees are known as binary recursive partitioning. The process is called binary because every parent node will always split into two child nodes. Recursive means that the
splitting process is repeated again on every child node where the child node will now be the parent node. This splitting process continues until it reaches the specified limits. The term partitioning means that the sample will be split down into smaller nodes. Two nodes that will be generated as child nodes in each split are called right node and left node.

Here is the main step of the classification tree process using CRT method:

1. Tree building process, which is the process of forming classification tree. This process begins by creating a single master node consisting of all respondents divided into categories of response variables. This parent node will be split into two child nodes based on certain splitting rule.

2. Splitting rule commonly used in CRT is Twoing-Criteria by calculating the value of goodness of fit when using splitter $s$:

$$\phi(s, t) = \frac{P_L P_R}{4} \sum_j \left| p(j|t_L) - p(j|t_R) \right|^2$$

$t_L$ : left node of the node $t$
$t_R$ : right node of the node $t$
$P_L$ : probability that the respondent is in the left node
$P_R$ : probability that the respondent is in the right node
$p(j|t_L)$ : conditional probability that the respondent is in the category $j$ if he/she is in the left node
$p(j|t_R)$ : conditional probability that the respondent is in the category $j$ if he/she is in the right node

The splitter $s^*$ is called best splitter from the node $t$ if $\phi(s^*, t)$ is greater than the other $\phi(s, t)$.

3. The process of making a classification tree will stop if the limits of the solution made by the researcher has been achieved.

**FINDINGS**

From the data obtained, the following results are obtained:

From 109 respondents there were:

- Gender 66.4% male and 33.6% female.
- Education 61.1% <= SMA, 13.3% S1, 23% S2, 1.8% S3, 0.9% others.
- Tenure 16.1% is <1 year, 44.6% is 1-<5 years, 23.2% is 5-<10 years, 16.1% is> = 10 years.
- Salary 84.8% received less than five million rupiah monthly salary and 15.2% received salary of more than five million rupiah per month.
- Need 52% is low and 48% is high

The variable measured by the Likert Scale has been checked for the reliability and validity of the item. From the analysis of the data obtained results tree classification as follows:
The restrictions used are: the minimum of the parent node is 20 respondents, the minimum of the child node is 10 respondents and the maximum number of branches is 5. From the formation of trees above classification obtained level of accuracy of 74.3% so it can be concluded that the tree classification model is quite good.

DISCUSSION

From the tree classification obtained the following discussion:

1. The variable that most influence the level of commitment to stay is loyalty. Employees with high loyalty will produce 74.4% employees with a high commitment. Employees with low loyalty will result 65.5% employees with a high commitment.

2. Other variables that affect the level of commitment to stay in a company is Education and Tenure.

3. Profile obtained based on Loyalty, Education and Tenure variables are as follows:
   a. Employees with high loyalty and less or equal D3 education level 88.3% will have a high level of commitment to stay. Employees with high loyalty level and have education S1 and S2, 53.8% will have a high level of commitment to stay. Therefore it can be concluded that for employees who have high loyalty and higher education will have lower probability of having a high level of commitment to stay. The company must consider about what policies that can make the high loyal employees with S1 or S2 degree of education increase their level of commitment to stay in the company.
   b. Employees with low loyalty and have education D3 or S1, 21.7% will have a high level of commitment to stay in a company. These results can be considered by the company so that they are encouraged to have a high loyalty.
   c. Employees with low loyalty, have low level of education and have tenure less than one year will have a higher level of the commitment to stay in the company compare with employees who has low loyalty, have low education and has tenure longer.
All the results can be an input for the company to make efforts to increase the commitment level of the employees

CONCLUSION AND SUGGESTION

This section will summarize the conclusions and suggestions that can be derived from this research

Conclusion: The variable that most influence the level of commitment of the employees to stay in a company is the level of loyalty. Employees with high loyalty levels will have a higher level of commitment to stay than employees with low loyalty levels. Other variables that affect the level of commitment level to stay in one company are education and tenure. Employees with low loyalty and high education have low probability to have high commitment level to stay in the company. It becomes a homework to handle this condition. Employees with low loyalty, low education and longer tenure will have a lower level of commitment to stay compare with employees with low loyalty level, low education and have a shorter tenure.

Suggestions that can be given through this research are:
1. PT ABC should think an effort to increase employees’ loyalty
2. PT ABC must think of ways or activities to handle employees with low loyalty and high education.
3. PT ABC must think of ways or activities to handle employees with low loyalty and low education and long tenure.
4. Such research may be made for a wider or national population by including more research variables.

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CONFESSIONS OF A MOOCER: AN AUTOETHNOGRAPHIC INQUIRY ON ONLINE DISTANCE EDUCATION

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ABSTRACT

Massive Open Online Courses (MOOCs) are dramatically restructuring, reshaping, and redefining the vast landscape of teaching and learning across the globe. With MOOCs’ ubiquity, openness, and accessibility, they have become a new platform for teacher professional development. Utilizing a co-constructed narrative inquiry (Bochner & Ellis, 1995; Toyosaki & Pensoneau, 2005; Vande Berg & Trujillo, 2008), we examine aspects of our memories, perspectives, and experiences in successfully completing Teach English Now!, a 150-hour online TESOL Certificate Course from Arizona State University, USA via Coursera (www.coursera.org) as the MOOC platform. Acting as reflective practitioners (Schon, 1987) and as teachers-as-researchers (Stenhouse, 1975), we unpack how we traverse the massive information superhighway in our quest for teacher professional development, what it is like to be an online learner, how we see our role, why we believe what we believe about MOOCs’ potential, and how we think this, all of this, affects our decisions and practices in our classrooms and contexts. We examined “through the refracted medium of narrators’ voices” (CHASE, 2005, p.666), how MOOCs’ ‘openness’ as afforded by cost-effective and ubiquitous technology serves as a practical platform for teacher professional advancement particularly in developing countries such as the Philippines. Andragogical and pedagogical implications are provided in the light of our MOOC experience.

Keywords: Connectivism; Cyberlearning; Massive Open Online Courses (MOOCs); Online distance education; Teacher professional development

1. INTRODUCTION
1.1 The Rise of MOOCs

Since the inception of CCK08: Connectivism and Connected Knowledge, a massive open online course (MOOC) that was designed and facilitated by George Siemens and Stephen Downes in 2008, offered to 25 tuition-paying students at the University of Manitoba and participated in at the same time by over 2200 students from the different parts of the world at no cost and without earning any credit (Educause, 2011; Decker, 2014; Lowe, 2014)
the ‘digital revolution’ in education (Brabon, 2014, p.1) was born. Since then, global education leaders, policy makers, field practitioners, and researchers have turned their gaze to the potentials of MOOCs in reimagining how knowledge can be communicated via this modern platform and in investigating whether MOOCs provide sound instructional design leading to quality outcomes and experiences for the students (Hayes, 2015). MOOC has become 2012’s buzzword in higher education (Daniel, 2012 in Chen, 2014). David Willetts, former U.K. Universities and Science Minister once heralded MOOCs as “the opportunity to widen access to our world-class universities and to meet the global demand for higher education” (Wintrup, Wakefield, & Davis, 2015, p. 6). Billington and Fromueller (2013) and Dyer (2014) stated in Israel (2015) that MOOC is a disruptive innovation to bring reform in higher education.

MOOC is an acronym for Massive Open Online Course, a term coined by Dave Cormier after Siemens and Downes’ CCK08 MOOC; however, Siemens and Downes credit the term to David Wiley and Alec Couros who created their own wiki-based free online courses in 2007 (Decker, 2014). Massive pertains to the potential of attracting thousands of enrollees from different parts of the world such as the case in 2011, when a MOOC on Artificial Intelligence developed by Sebastian Thrun who was a professor at Stanford University, was taken by approximately 160,000 students from around the globe with 28,000 students who successfully completed the course. Open means that anyone from anywhere in the world, regardless of educational background, socioeconomic status, gender, age, and color, can enroll in a MOOC via the Internet. Liyanagunawardena et al. (2013) noted that the word Open implies that people do not require any specific academic qualification, fees, and completion of courses. Others suggest that the term Open should refer to Open Access, which means that the content of a MOOC is not only free and available to everyone, but is under Creative Commons License allowing anyone to download, save, reuse, remix, retain, and redistribute content to suit his or her purpose and context with proper acknowledgement of the developer (Decker, 2014). Yuan and Powell (2013 in Philippine Institute for Development Studies, 2015) wrote, “The development of MOOCs is rooted within the ideals of openness in education, that knowledge should be shared freely, and the desire to learn should be met without demographic, economic, and geographical constraints.” Online refers to the mode of content delivery, which is accessed by the learner via the Internet using electronic gadgets such as desktop computer, laptop, tablet, phablet, and cellular phone. Course entails the format of how a certain course operates with phases such as enrollment, start and end dates, course content, assessment and evaluation.

The MOOC movement in educational landscape was picked up by various institutions and they started establishing MOOC platforms in collaboration with various field experts and organizations. Some of the most notable MOOC providers in the world include the following: Udacity (www.udacity.com), founded in June 2011 by Sebastian Thrun, David Stavens, and Mike Sokolsky and launched in February 2012; Coursera (www.coursera.org), founded by Andrew Ng and Daphne Koller and launched in April 2012; edX (www.edx.org), created by scientists from Harvard University and Massachusetts Institute of Technology (MIT) and launched in May 2012; Canvas Network (www.canvas.net), launched in November 2012 by Instructure which was founded by Brian Whitmer and Devlin Daley in 2008; Open2Study (www.open2study.com), launched in April 2013 by Open Universities Australia; and Iversity (www.iversity.org), created by Jonas Liepmann and Hannes Klöpper and launched in October 2013.
MOOCs gained both appraisals and criticisms. Opinions about MOOCs are divided about their value and importance. MOOCs are seen as ‘significant catalysts’ in education (Bayne & Ross, 2014), as ‘an innovation with great potential to widen participation and promote lifelong learning’ (QAA, 2014), and as a ‘recent stage in open education’ (Creelman, Ehlers, & Ossiannilsson, 2014). On the other hand, MOOCs are viewed as ‘disruptive technology’ (Christensen, 2010), as merely a ‘marketing exercise’ (Conole, 2013), and as a ‘lousy product’ (Thrun, 2013). And in places like Harvard, several liberal arts professors have been protesting “the rush to embrace MOOCs, which they worry will undermine the personal, intellectual connection inherent to a liberal arts education” (Carr, 2013, p. 2 in Johnson, 2013). Nevertheless, Creelman et al. (2014) emphasize that ‘MOOCs present the possibility of new approaches to education,’ and Wintrup et al. (2015) suggest three key areas for further research on MOOCs: education enhancement focusing on curriculum developers and learners, higher education providers and their marketing teams, and researchers and policy makers.

1.2 MOOCs for Teacher Professional Development

The emergence and use of MOOCs for teacher professional development (henceforth, TPD) is still uncommon, but it is on the verge of gaining a foothold (Jobe, Ostlund, & Svensson, 2014). Research on MOOCs primarily focuses on impacts for higher education and lifelong learning, with little attention given to the intersection of MOOCs and TPD. While TPD is considered as an established growing research field, Evans (2002) elaborates on the lack of a clear definition of the concept of TPD. He then provides a broad definition of TPD that focuses on professional development as a process, where a teacher performs an activity to achieve attitudinal and functional development. TPD can foster improvements in teaching (Kennedy, 2016). Kennedy (1998) categorized research on TPD into four foci: (1) generic teaching principles, (2) subject-specific teaching practices, (3) curriculum and pedagogy, and (4) how students learn. Major research on TPD focused on TPD per se (e.g., Borman, Gamoran, & Bowdon, 2008; Penuel, Gallagher, & Moorthy, 2011), evidence of student achievement (e.g., Roschelle et al., 2010), motivation for learning (e.g., Roth et al., 2011), impact on student performance (e.g., Heller, Dahler, Wong, Shinohara, & Miratrix, 2012), and TPD program design (e.g., Sher & O’Reilly, 2009; Opfer & Pedder, 2011).

Conducting TPD is often costly, as it requires the use of resources from both the funding organization and the teacher participant. Odden, Archibald, Fermanich, and Gallagher (2002) described in detail the various issues with measuring expenditures for TPD and created a cost-framework to categorize TPD costs that consisted of six key elements: (1) teacher time, (2) training and coaching, (3) administration, (4) materials, equipment, and facilities, (5) travel and transportation, and (6) university tuition and conference fees.

With the increasing costs of and high demand for TPD, a logical combination is to use the concept of MOOC. This solution makes traditional educational courses available free. Coursera recently took a step in this direction and announced the addition of education schools to their course providers, which offer courses specifically catered towards teacher professional development (Pope, 2013). Furthermore, Coursera added a search parameter for course type entitled “Teacher Professional Development”, and 1,164 courses are currently available in this category. The support for MOOC providers moving from offering only traditional learning to even offering career development (lifelong learning) and blended learning opportunities is
supported by Emmanuel (2013), whose study showed that 83% of MOOC participants already have two- or four-year post-secondary degree. This suggests that current participants are already using MOOCs to extend their learning beyond existing degrees. One study that affirms this observation was conducted by Mackness, Waite, Roberts, and Lovegrove’s (2013), which showed that small task-oriented MOOCs can effectively support professional development of open academic practice. However, while MOOCs for teacher professional development are increasingly gaining momentum, there is little account about their effectiveness to the teacher participants in various contexts. In general, the body of research studying the use of MOOCs for teacher professional development is scarce (Jobe, Ostlund, & Svensson, 2014). It is this gap that this paper intends to address.

1.3 Arizona State University’s Teach English Now!: A MOOC for TPD

This paper explores our experiences and viewpoints upon successfully completing Teach English Now! – a teacher professional development program offered by Arizona State University (ASU) via Coursera. Located in Tempe, Arizona, United States of America, ASU is a top 100 school globally and is recognized for its outstanding programs and innovations. ASU is ranked 1 ‘Innovative University in the U.S.’ and ranked 1 ‘Producer of Fullbright Scholars’ by the U.S. News and World Report. Coursera is the world’s biggest MOOC platform with 149 university partners, over 2,000 courses, more than 180 specializations, 4 degrees, and over 25 million learners. Teach English Now! is an online 150-hour TESOL or Teaching to Speakers of Other Languages Certificate Program consisting of a series of eight courses that can be completed on a self-paced mode from 16 weeks to 1 year. This course meets all standards outlined by the TESOL International Association – the world’s authority for TESOL for over 50 years now.

The Teach English Now! TESOL Certificate Courses include the following: (1) Foundational Principles, (2) Theories of Second Language Acquisition, (3) Lesson Design and Assessment, (4) Second Language Reading, Writing, and Grammar, (5) Second Language Listening, Speaking, and Pronunciation, (6) Technology-Enriched Teaching, (7) Capstone 1, and (8) Capstone 2. The estimated cost of the TESOL Certificate is $392.00. We started to take Teach English Now! last April 2016 and we successfully completed the eight courses. We graduated last December 2016 and received our TESOL Certificate from ASU.

1.4 Research Questions

This paper shows our experience-based testimonies about our successful completion of ASU’s 150-hour Teach English Now! TESOL Certificate Course and how it has shaped our professional development as English language educators. Specifically, we aim to address the following questions:
1. What are the features of Teach English Now! that make it an effective online course for teacher professional development?
2. How do we reflect upon our teacher professional development based on our Teach English Now! experience?

2. METHODS

This study utilized an autoethnographic inquiry to reveal our personal experiences in participating in and completing Teach English Now! as a form of our teacher professional
development. Autoethnography is an approach to research and writing that seeks to describe and systematically analyze (graphy) personal experience (auto) in order to understand cultural experience (ethno) (Ellis, 2004; Holman Jones, 2005). Autoethnography can take in many forms: layered accounts (Charmaz, 1983), reflexive ethnographies (Ellis, 2004), narrative ethnography (Tedlock, 1991), co-constructed narratives (Vande Berg & Trujillo, 2008), interactive interviews (Ellis, Kiesinger, & Tillmann-Healy, 1997), reflexive dyadic interviews (Ellis, 2004), personal narratives (Tillmann, 2009), indigenous/native ethnography (Denzin, Lincoln, & Smith, 2008), and community ethnography (Toyosaki, Pensoneau-Conway, Wendt, & Leathers, 2009). Our autoethnographic inquiry aligns with Stenhouse’s (1975) ‘teacher-as-researcher’ and Schon’s (1987) ‘reflective practitioner’ concepts.

2.1. Data
We used co-constructive narratives (Vande Berg & Trujillo, 2008) to draw upon our experiences in successfully completing Teach English Now! We analyzed our personal journals, chat messages, MOOC discussion forum posts, MOOC peer feedback, ASU expert comments, and dyadic discussion from April to December 2016. After our individual analysis of our experience, we gathered and reflected upon our eight-month MOOC journey. Because we intend to make sense and draw meaning from our experience, the narrative inquiry seems appropriate as it “captures personal and human dimensions of experience over time, and takes account of the relationship between individual experience and cultural context” (Clandinin & Connelly, 2000). The main claim for the use of narrative in educational research is that humans are storytelling organisms who, individually and socially, lead storied lives. The study narrative, therefore, is the study of the ways humans experience the world (Connelly & Clandinin, 1990). In narratives, we see “the story in the study, the tale in the theory, the parable in the principle, and the drama in the life” (Ruby, 1982; Clifford & Marcus, 1986; Suleiman, 1986; Turner & Bruner, 1986; Sacks, 1987; Rosaldo, 1989; Bordo, 1990).

3. RESULTS AND DISCUSSION
3.1. Navigating ASU’s Teach English Now! via Coursera MOOC Platform
After searching for ways to advance our knowledge and skills in English language teaching, we came across the concept of MOOCs by navigating through the Internet. We have learned about various MOOC platforms such as edX, Coursera, and Udacity, and searched for possible courses that would fit our interest and schedule. We were full-time university instructors and heavy workloads and expensive training costs would usually prevent us from taking leave of absence to attend teacher seminar-workshops and conferences for professional development. We were excited to discover that there were several teacher specialization courses offered by top universities across the globe that we could take via MOOC platforms. After comparing course offerings and syllabi, we finally decided to enroll in Arizona State University’s Teach English Now! via Coursera. Teach English Now! consisted of eight courses amounting to $49 each. Because we lack financial resources, we decided to avail of Coursera’s ‘Financial Aid’. The ‘audit course’ option was possible with free access to the courses; however, there would no certificate given upon completion of the course. We needed to have certificates for submission to our university’s promotional program. In applying for Coursera financial aid, we needed to answer the following questions for evaluation of the scholarship grant committee. Application for financial
aid was required for each of the eight courses. The instructions read like this:

_If the financial aid is the right option for you, please proceed by filling out this application:_

1. What is your annual income in USD?
2. Which country are you located in?
3. Please describe your financial need and explain the specific circumstances that motivate your request for financial aid. (50-300 words)
4. Please tell us why you are taking this course. What is your interest in this field? How would a Course Certificate be valuable to you? (50-300 words)
5. When participating in this course, how do you intend to demonstrate academic integrity and contribute to the course’s community? (50-300 words)

We received the financial aid notification from Coursera via email within the day of application. However, at present, it would take approximately 15 days to receive the notification due to bulk applications from several course takers around the world. As soon as we received the scholarship grant from Coursera, we started taking the eight courses of _Teach English Now!_

### 3.2 MOOC-ing, Learning, Collaborating

We started our online teacher professional development as _Teach English Now!_ participants on April 1, 2016. The eight courses were divided into two specializations: _TESOL Certificate, Part 1: Teach English Now!_ and _TESOL Certificate, Part 2: Teach English Now!_ Part 1 consisted of the following four courses: _Teach English Now! Foundational Principles, Teach English Now! Theories of Second Language Acquisition, Teach English Now! Lesson Design and Assessment, and Teach English Now! Capstone Project 1_. Part 2 had the following four courses: _Teach English Now! Second Language Reading, Writing, and Grammar, Teach English Now! Second Language Listening, Speaking, and Pronunciation, Teach English Now! Technology Enriched Teaching, and Teach English Now! Capstone Project 2_.

In _Teach English Now! Foundational Principle_, we learned about foundational principles on concepts such as motivation, risk taking, and balancing the teacher profession by identifying, summarizing, and evaluating seven basic language learning paradigms through a series of engaging metaphors and stories. In _Teach English Now! Theories of Second Language Acquisition_, we were introduced to second or foreign language theories and practices for teaching and assessing listening, speaking, and pronunciation by presenting a historical approach of teaching practices of different teachers through the years. In _Teach English Now! Lesson Design and Assessment_, we learned about designing lesson plans based on principles and knowledge of learning objectives, assessment plans, methods, materials, and learning activities. It also taught us to find and prepare teaching materials through careful analysis, adaptation, and creation of professional resources.

_Teach English Now! Second Language Reading, Writing, and Grammar_ presents to us information on reading and writing courses, and the integration of grammar within those courses. It takes us through a series of fairy tales and fables to examine basic reading and writing strategies. _Teach English Now! Second Language Listening, Speaking, and Pronunciation_ introduces us to the aspects of listening and speaking that are challenging for students and teachers. We also learned about basic strategies that can help ease the acquisition
and instruction of listening and speaking. *Teach English Now! Technology Enriched Teaching* presents us some key concepts on effective integration of technology into our teaching, without overshadowing language learning. We were also introduced to current and future trends in educational technology, along with strategies for implementing these trends in the classroom.

*Teach English Now! Capstones 1 and 2* are online practicum where we demonstrated our teaching skills, as we built on our assignments from the previous courses to deliver lesson plans, observe teaching demonstrations from ASU’s master teachers, and create a professional teaching portfolio, which served as the final course requirement. The portfolio was a compilation of all the outputs from the eight courses such as teaching philosophy, teacher tip, lesson plans, and micro teaching videos. The capstone for specialization 1 was peer reviewed, while the capstone for specialization 2 was expert reviewed. We prepared 10 hours of lesson plan content and we recorded ourselves instructing for a portion of each of the lesson plans in a micro-lesson format. We recorded 10 videos that were 6-10 minutes long and uploaded full lesson plans. Our peers from the different parts of the world watched our micro teaching videos, read our lesson plans, and provided peer feedback. We also had six hours of observation of full lesson plan videos of ASU master teachers. We received individual certificates for each of the eight courses successfully completed and two additional certificates indicating completion of the specialization courses. After we successfully completed Capstone 2, we received Arizona State University’s TESOL Certificate with a certificate number and signed by ASU’s Office of the University Provost and the Lead Course Instructor. ASU also provided a permanent verifiable web link for the certificate. Below are samples of the certificates we received from ASU and Coursera.

Figure 1. ASU-Coursera Certificate for Individual Courses
(Shareable and verifiable link: coursera.org/verify/PZ946322RJ2Q)
Our ASU-Coursera eight-month journey for teacher professional development was not a walk in the park. We had several simultaneous roles: a full-time classroom instructor with 30 hours of teaching load weekly, a part-time graduate school student taking a doctorate degree in Applied Linguistics, and a MOOC learner. However, despite our hectic schedule, we managed to stay focused on the MOOC by having a strong time management system, self-discipline, and peer collaboration. We engaged everyday via face-to-face discussions, online chats, text messages, and phone calls about our MOOC tasks, consulting with each other and sharing ideas about how we understood certain concepts and how we performed in the online quizzes, peer feedback, expert feedback, online discussion forums, micro teaching demonstrations, and weekly assignments. We had a very challenging time, but we were happy and satisfied that we were learning tremendously every day. After analyzing our journal entries, chat messages, and online discussion posts, we have identified important points that we believe had helped us...
successfully complete ASU’s TESOL Certificate Course. These include the following: (1) comprehensive course design, (2) avant-garde teaching approaches of the MOOC instructors, and (3) engaging and supportive learning community.

ASU’s 150-Hour TESOL Certificate Course follows TESOL International Association’s standards for short-term TEFL/TESL certificate programs (TESOL.org, 2015), which include organization and program management standards, curriculum and instructor standards, and candidate standards. Following TESOL’s organization and program management standards, we observed that the ASU TESOL Course adhered to the following standards: English was used as a medium of instruction, there were clear goals and varied instructional methodologies, there was a formal plan for revision and review, and there were formative and summative assessments. With curriculum and instructor standards, we observed that the curriculum observed prescriptiveness and flexibility of the lessons for local contexts, as well as there were opportunities to demonstrate our best practices. As regards candidate standards, we observed that the following domains were addressed: language, culture, instruction, assessment, and professionalism. We learned about the structure and components of language such as phonology, morphology, syntax, and semantics; the role of language in the society; and the importance of English in the world today. We also learned about the theories of first and second language acquisition, as well as how people learn language in a variety of contexts. Furthermore, we learned about planning instruction such as skills integration, implementing instruction such as the inclusion of activities for meaningful and authentic use of language, and using instructional resources such as selection and adaptation of appropriate print and virtual materials. With these, we were assured that the course that we were taking adhered to the global standards, and that we were getting good and quality education that was worth our time, energy, and effort.

Another feature of the course that had captivated us was the use of avant-garde approaches to teaching by ASU TESOL experts, who did not resort to talking-head lecture-style format of teaching. Despite having heavy workloads, we were excited to learn from engaging lecture videos, which employed creative and thematic techniques. Consequently, the course ranked highest in terms of completion rates and student rankings. Some of the learners commented that the course was ‘excellent’, ‘marvelous’, and ‘amazing’. Other learners noted that ‘the course was presented well…the team put together an effective presentation of important techniques for teaching language…and the material was clear, thorough, and important’ (https://www.coursera.org/learn/english-principles#ratings). Our journal entry dated 12/19/2016 echoes this observation: “Finally, I’m done! It was a challenging yet worthwhile online learning experience. Kudos to the Teach English Now! Team especially to Dr. Shane Dixon for a very engaging and innovative approach to online teaching. Definitely one of the best and most memorable learning experiences for me!” In fact, because of the course’s engaging, entertaining, and informative approach, of over 1,800 courses on Coursera, it won the ‘Learners First Award’ during Coursera’s First Annual Outstanding Educator Awards in the Partners Conference in 2016 (http://coursera.tumblr.com/post/142019252717/congratulations-to-the-winners-of-courseras-first). ASU’s Teach English Now! Team comprised of Dr. Shane Dixon, Dr. Justin Shewell, Andrea Haraway, and Jessico Cinco was recognized because of their approaches that are ‘remarkably innovative, transformative, or beloved by learners’ in ‘delivering uniquely engaging and high-quality experience’ for the learners.
Finally, one of the significant highlights of our online TPD was the engaging and meaningful collaboration with over 100,000 learners from over 170 countries who were also taking the course. We had weekly discussion forums where we could post our comments and concerns, respond to queries, and communicate with our classmates and instructors. In addition, as part of the course assessment, all of our micro teaching video demonstrations and full lesson plans were reviewed by our peers who provided valuable feedback and insights about our outputs using rubrics provided by ASU. Likewise, we also performed the same peer feedback assessment, which taught us how to evaluate our peers’ outputs and provide suggestions so that they could improve their work. An instance of a motivating and affirmative feedback by a MOOC peer was given 12/07/2016: “Great lesson plans and videos! I like that you applied a lot of techniques that we learned in the courses. You included a lot of good resources! Your teacher talk in the videos is good and you’re very enthusiastic!” We also learned how to produce quality outputs based on ASU expert comments, who evaluated our work to ensure that we adhered to the standards set by the course. For instance, an expert feedback dated 11/28/2016 stated: “…I don’t see any reason to just pass someone so that they can fail outside of the class. As a certified teacher in the State of Arizona, and an expert international Educator at ASU, I know what it takes to create a hire-worthy portfolio having created one for myself…” These peer and expert feedback afforded us impetus to continue our MOOC journey; also, they encouraged and challenged us to perform at our best, which prompted us to reflect on our performance and practice. The MOOC acted as a virtual community of practice that allowed individuals to collaborate and learn with one another.

3.3 MOOC-ing, Refracting, Reflecting

Our eight-month MOOC journey has reshaped the way we learn and teach. We realized that online education could be as engaging, effective, and meaningful as offline/face-to-face education. Our experience with ASU-Coursera’s Teach English Now! has taught us that with the right blend of course design, virtual instructors’ approaches, and participants’ motivation to learn and collaborate, the online TPD could be personally, socially, and professionally rewarding. We obtained invaluable ideas, insights, and perspectives that are now guiding our pedagogical practice. Our chat message dated 12/23/2016 affirmed this: “Ito na ang best Christmas gift. Natuto tayo ng marami at libre pa! Di ko inexpect na sobrang fruitful pala ng MOOC. Dami kong kelangan idagdag at baguhin sa approach ko sa pagtuturo…” [This is the best Christmas gift ever. We learned a lot and it was free! I didn’t expect that MOOC could be so fruitful. I have a lot to improve and change in my teaching approach…”]. Personally, we have felt fulfilled and happy that we were able to accomplish something that we could consider a lifetime achievement. We have broken barriers to TPD despite our limited resources. We were able to improve ourselves through diligence, fortitude, and willingness to learn. Socially, we have felt connected and engaged as we were able to communicate and collaborate continuously during and after the completion of the course with our global peers and instructors via the MOOC’s online discussion forums, Teach English Now! LinkedIn community (https://www.linkedin.com/groups/8572608/profile), and Teach English Now! official Facebook page (https://web.facebook.com/teachenglishnowMOOC/?ref=br_rs). Professionally, we have become more confident as English language educators, as we were able to validate our own pedagogical practice through the help of our peers and instructors who provided us useful and practical suggestions to better our craft. We have also gained knowledge and developed our
skills through open educational resources (OERs) and practical tasks. We have felt equipped that we were able to understand the theoretical underpinnings of our own classroom practices guided by the teaching and learning principles discussed in the MOOC. We believe that our MOOC journey is not only a learning experience; it is a transformative event in our personal, social, and professional lives.

3.4. Connecting the Dots

Our MOOC experience is a living testimony and contribution to the “relatively novel and uncharted” field of online teacher professional development (oTPD) (Jobe, Ostlund, & Svensson, 2014). As opposed to previous research findings that suggest that several TPD programs are not of high quality offering “fragmented, intellectually superficial” seminars (Borko, 2004, p.3), our MOOC experience proves otherwise. ASU’s Teach English Now! embodies an oTPD that enables improvement of the different aspects of its learners (Whitehouse, Breit, McCloskey, Ketelhut, & Dede, 2006): subject knowledge, pedagogical knowledge, subject knowledge and pedagogy, critical reflection/beliefs/orientation, standards alignment, skill/efficiency, teacher discourse/collaboration, and practice community. Furthermore, our experience attests that ASU’s Teach English Now! possesses the seven characteristics of effective professional development as outlined by Darling-Hammond, Hyler, & Gardner (2017): it is content focused, it incorporates active learning utilizing adult learning theory, it supports collaboration, it uses models and modelling of effective practice, it provides coaching and expert support, it offers opportunities for feedback and reflection, and it is of sustained duration. The experience that we had with ASU’s Teach English Now! innovative course format, dynamic and professional instructors, and collaborative and supportive community of learners made our MOOC oTPD journey worthwhile and rewarding.

4. CONCLUSION

Teacher professional development is seen as a keystone in strengthening educators’ performance levels and raising student achievement (Mizell, 2010). However, with increasing costs, lack of resources, and busy schedules, teachers are not always given opportunities to participate in TPDs; hence, there is a need for online teacher professional development programs (Whitehouse, Breit, McCloskey, Ketelhut, & Dede, 2006) that will allow customized, self-paced, and expert-supported education. The concept of MOOCs for TPD appears to be a logical and practical answer to this concern. With the ubiquity of modern technologies, innovative MOOCs may prove to be a viable and practical means to afford teachers around the world the opportunity to develop and advance themselves professionally. In this digital era when everything seems to be connected and accessible via the fingertips 24/7, educational institutions can tap the technological resources to provide alternative learning models, employing well-designed programs and state-of-the-art approaches. The learners, on the other hand, must be cognizant of the many opportunities that abound and should be able to maximize their learning with eagerness, determination, and commitment.

5. ACKNOWLEDGEMENT

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6. REFERENCES


**Siswoyo: Science for the Homeland and People 1958-1965**

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**Abstract:**

Indonesia Communist Party (PKI) activity after revolution have a characteristic to organizing the masses emphasized on strong didactic elements. Initiating learning process for many peoples from different group and layers, not only among workers and farmers that become their basic masses. PKI performs literacy eradication, teach reading, counting, and introducing people to science. It is a form of communication from PKI that makes this party occupies fourth position on election in 1955 and have a progressive big masses. Until makes Sukarno believe that PKI can bring him to revolution. This is can be interesting theme, if we look why education become an important agenda for PKI? This paper use literary methods to discuss the role of Siswoyo in educational programs organized by the PKI. The one of his role is Universitas Rakyat (Unra). Leader of PKI that responsible to education in the body of party is Siswoyo. Siswoyo's thought about education become base of driving force the party. Educational principles that planned by Siswoyo is to reject old thinking tradition that has a motto "ilmu untuk ilmu". Siswoyo see that education must be "ilmu untuk rakyat".

**Keyword:** Siswoyo, PKI, Education, Politic, Science, People

**INTRODUCTION**

When interviewing the former members and sympathizers of the Indonesia Communist Party (PKI) on April 2017 in the lecture of the Oral History Methodology, I was amazed with their memory and knowledge. The explanations given brought the chroniclers back to the Guided Democracy period. A generation that had high militancy for the movement works and was consistent studying knowledge derived from books and experiences. Certainly they were led by a definite ideal, revolution.

PKI knew very well how to treat its members and sympathizers. In revolution, all kinds of fronts must be mastered. With the duty of dispelling all kinds of resistance caused by neo-colonialism and popular neo-imperialism at that time. Its leader made strategies to master the ideological and cultural fronts. With the demand to give birth to a new society in revolution flow. The strategy was to initiate the establishment of educational institutions.

One of the western scholars, Rex Mortimer, bluntly stated that PKI represented the most promising prospect for the reconstruction of Indonesian society in sustainable development for it is combined with their great attention for the social welfare of the masses, and the removal of social imbalances and narrow-minded bureaucratic that had knocked down Indonesia.\(^{228}\)

The PKI and its mass organizations, like many other social organizations in Indonesia at the time, took part to fill the gaps. For example, every branch of Gerwani opens a Kindergarten called the Melati Kindergarten. Gerwani women also work voluntarily for literacy campaigns organized by the state that sends these educated urban girls to villages to teach in literacy classes for children and adults. Many PKI offices had changed into classrooms in the afternoon for adult education, a program which the party called in 1958 as the Universitas Rakyat.\(^{229}\)

As an educational organization, PKI had so far been written by Indonesian from Cornell University, USA in the writing entitled *Teaching Modernity: The PKI as an Educational Institution* published the first time in the INDONESIA journal, volume 50, in October 1990. In

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his writing, Ruth McVey stated that education had been the main focus of party activity during 1951-1965. This was the key to PKI’s success in embracing the masses who in the speech of President Sukarno at the 45th anniversary meeting of the 45th PKI conveyed that PKI became strong, and owned 3 million members, with its sympathizers of 20 million.

After the presence of Ruth McVey's writings, it is still important to discuss the role of the PKI as an educational institution, which so far has been contributing not only in the party's internal, but generally to the national education. Therefore, if it can be said, this paper comes in addition for the previous research that had been done by Ruth McVey. Where Ruth McVey still had not put educational thought basic which was the driving force of educational institutions organized by PKI. The PKI leader who was in charge of the education program was Siswoyo. Siswoyo’s thoughts on education became the basic of the driving force.

The writing using this literary study method discusses the role of Siswoyo's educational thinking in educational programs organized by the PKI, one of which is the University of the People (Unra - Universitas Rakyat). The main sources written in this paper are Siswoyo's speeches at the opening of Unra in 1958 and during the PKI’s Fourth National Congress of 1959. His speeches had been published by PKI in a book with separate titles. In addition, this paper uses the inventory archive of Komando Operasi Tertinggi 1963-1967. The archive used was the material of a Communist Master's Seminar made by regional PKI committee Jogjakarta, and the speeches of PKI Leader's speech about his ideas on education. While in an oral source, I will use the results of an interview conducted in April 2017 in Semarang with Ragil, a teacher who once took care Unra in Central Java in the early 1960s until 1965. And other sources supporting the explanation of Siswoyo's education thoughts biography.

THE LIFE HISTORY OF THE “MERAH DAN AHLI”

Born to a wedana assistant couple named Pratiwopranoto and Suratmi, Siswoyo was born in Solo, October 10th 1925. Siswoyo was the fourth of six children, all of whom were men. Siswoyo's name was given when his father Pratiwopranoto was undergoing the task of learning kepamongprajaan. Siswoyo means students.

In his family tree, Siswoyo had the "rebel" blood. From the mother line, Siswoyo still had hereditary relationship with Mangkuprodjo, a duke during the Paku Buwono IV dynasty from Kasunanan Surakarta. Duke Mangkuprodjo with his wife G.R.A Retno Dumilah, were thrown by the VOC to Pekuncen because they were considered as stubborn rebels. Since they also did not want to apologize, they became political exiles for the rest of their lives until their death. Now their grave yards can be found in Pekuncen Village, Kroya District, Cilacap Regency. From the father line, counted as the descendants of Prawirotaruno—one of the triad of brother-in-law officers of one of the mainstay of Prince Dipenogoro. During the Dipenogoro War, these three officers (Prawirosekti, Prawirodigdojo, and Prawirotaruna) were highly respected by their enemies. Especially Prawirodigdojo, he was one of the commanders of Prince Dipenogoro's army and was known as a combat prince. He died in battle against the VOC around Muntilan.

230 Ibid., 11.
With a father status as a *pamongpraja*, Siswoyo often moved his school. First, Siswoyo studied in *Hollandsch-Inlandsche School* (HIS) Muhammadiyah Mlinjon, Dutch’s school owned by Haji Siradj. Only about one and a half years, his father was then transferred to Sawahan. Siswoyo moved to the state HIS (*Openbare HIS*) Mangkubumen, Solo. When his father moved to Klego, Siswoyo was admitted to *Christelyke HIS* school in Jebres, Solo. In this school Siswoyo was active in organization. Joining the organization called Suroyo Wirawan, an organization of the youth from Great Indonesia Party (*Partai Indonesia Raya* - Parindra), Siswoyo was first in contact with movement. Beside he was active in organization, Siswoyo joined *Indonesia Berparlemen* movement. A movement consisted of the youth from *Indonesia Berparlemen* introduced Siswoyo to political activities. His first introduction was to read political books, such as *Indonesia Menggugat* and *Penyebar Semangat* magazine.\(^{233}\)

Siswoyo went to *Meer Uitgebreid Lagere Onderwijs* (MULO) Kristen Banjarsari, Solo without taking any test. That was because of his good grades earned in his previous school. As a result of World War II, Siswoyo's activities were actually spent to join the ranks against Japanese fascism. In Japanese period, MULO was renamed into Chugako, after that he went to agricultural school in Bogor. In Bogor, Siswoyo was involved in a Japanese-built military exercise. The Japanese occupation period until the declaration of Indonesia independence made the educational institutions stopped. All young people of Siswoyo’s age actually get educated directly from the field practice with revolutionary spirit.

Siswoyo then decided to return to Solo and enroll himself in a high school at Pura Mangkunegaraan and founded the Indonesian Student Association (IPI) Surakarta - here Siswoyo became its chief leader. In the management of IPI Surakarta, Siswoyo was responsible for Information and Education charge. The task was to organize political discussions with the aim of increasing the knowledge and political awareness of its members. By this activity Siswoyo became acquainted with figures from the Movement of the Republic of Indonesia (*Gerakan Republik Indonesia* - GRI), a local leftist organization in consisted of many PKI cadres.

Siswoyo and IPI Surakarta members got a political course from Aidit and Lukman on Materialism, Historical Dialectics (MDH). After this political course, Siswoyo plunged into advanced courses which were held more seriously and deeply in GRI office. The participants were limited only for 20 people and the lectures were delivered by Sjamsudin Musanif, a teacher from West Sumatra and a former writer. After joining the GRI course, in 1946 Siswoyo officially became a PKI member.\(^{234}\) At the end of 1947 the PKI Section Committee of Surakarta held a member meeting with the agenda of perfecting the stewardship, Siswoyo was elected as the secretary.

Siswoyo's political journey was in line with the fall and rise of the party during the flaming period. During the Dutch aggression, Siswoyo entered into the physical revolution struggle. Until the outbreak of *Madiun Affair* in 1948 and the party suffered severe beatings, in Surakarta Siswoyo kept trying to reactivate various party activities, such as party lectures, forming mass organizations and visiting invitations from other parties.

A year after the PKI Confucius in 1952, the new PKI leader Aidit appointed Siswoyo to prepare the establishment of Central Java PKI regional committee. Siswoyo was appointed as the chairman and helper of representative lasted until 1956. The PKI was elected as a legal


party, in 1954 the PKI organized the 5th Congress at the SBKA Meeting Building, Manggarai, Jakarta. Siswoyo who had received a note from the PKI’s core leadership as a cadre capable of reviving the PKI with massive mass quantity in Central Java. At the 5-PKI Congress Siswoyo was elected for the PKI CC. Siswoyo became the youngest member of CC, he was 29 years old at the time.235

The PKI leadership with Aidit considers it his job to fix the ideological damage that occurred because of misconceptions among his formers, and to open the people’s eyes to communism as a solution for the post-revolution Indonesia crisis. Aidit declared that revolution was still unfinished: the revolution did not entirely fail, but was obstructed both in national and social terms, then neglecting Indonesia in a “semi-colonial” and “semi-feudal” state. Agitation was a way of making people see it, but more broadly, in the eyes of PKI leaders, it was a matter of education. The activities of parties and mass organizations therefore had strong didactic elements.236

In 1958, PKI established the Department of Education of Science and Culture. Siswoyo was involved in it. The establishment of this department was the decision from the PKI VI Congress, the field of education became the priority. PKI continued its educational development program involving the education of party functionaries as well as the majority of the masses. Why education was important? Siswoyo explained that the basic idea was people’s resurrection was not enough to be guided by the political line, passion and courage. But people resurrection must also be balanced by the ratio. Otherwise anarchist revolutionaries would rise. Thus, here it is important to develop general education to increase the ratio among the masses, so that they can think more mature, clear and objective.237

SCIENCE FOR PEOPLE: SISWOYO EDUCATION THOUGHT

Basically, PKI was not the only organization in Indonesia after the proclamation of independence which considered education to be an important agenda. The organizations that had become tangible parties—which previously had a strong civil base had earlier undertaken cultural work by establishing educational institutions. Some of these were carried out by organizations that captured the basis of the mass religious, by establishing a number of islamic boarding school or open schools for the masses outside the targeted mass community.

The differences PKI made when the party came back was to become legal after the Razia Agustus 1951. PKI had a vision to create a new man for Indonesia. The leader of PKI—one of which was Siswoyo always guided by the ideals of the Indonesian revolution that had the spirit of anti-imperialism. Of course this spirit was not just a slogan like the accusations that ever existed, because PKI leaders had a strong theoretical belief in Marxism-Leninism. That was the basic of their thoughts and actions.

PKI leaders believed that the Indonesian revolution had not yet been completed. There were stages that must be passed before they believe the socialist revolution had a close correlation with the socio-political conditions of Indonesia. The stages for the Indonesian revolution which the PKI believed were the national revolution and the democratic revolution. The thoughts of PKI leaders were always guided by these two stages of revolution. These two

235 Ibid., 129.

236 This is explained by Ruth McVey. Look at Daniel S. Lev and Ruth McVey, Menjadikan Indonesia: Dari Membangun Bangsa menjadi Membangun Kekuasaan (Jakarta: Hasta Mitra, 2008), 182.

revolutions had the duty to eliminate the thoughts and actions of the remnants of feudalism and the remnants of colonialism.

The duty of this sacred revolution guided Siswoyo's thinking on this education, and transformed into the form of an educational institution called Unra. For Siswoyo, during the Indonesian revolution there were shortcomings resulted in succession. The downside had not been formulated clearly and firmly on the main issues of the revolution. The uneven form of revolutionary struggle held in all fronts was the front of armed struggle, the front of the economic struggle, the front of the political struggle, the ideological front, the cultural front and the science front. From all this, Siswoyo's thought was the front of ideology, culture and science.

Education principles proclaimed by Siswoyo rejected the tradition of conservative thinking which at time that had slogan "science for science". This kind of thinking tradition caused the learners isolate themselves from other’s life, from social life. It could become an enemy channel (imperialism). Therefore, the duty of revolutionaries in the science front of was against the tradition of conservative thinking by promoting the people to enhance the level of culture, science and ideology. For Siswoyo, science must be in line with people. Because people were the majority of human beings and creators of the future of mankind. The Indonesian man's partisanship was the willingness to fight for the land liberation from the exploitation of imperialism and feudalism. Science could not be separated from people; thus the work of the brain was also inseparable with the work of the body.

Siswoyo saw that the task of national education to prepare the conditions, both in the field of science and in the field of morals and ethics, for young people who will build a happy new Indonesia for the workers. This task was in line with the completion of Indonesian revolution to its roots. What fundamentals should be given to these new young Indonesian builders?

Siswoyo answered, first, we must educate them to love and respect job and labors. Moral and bourgeois politeness glorifying "money kings" and despising "those who work" must be replaced by the moral of loving and upholding the worker and the worker. Second, our children must be educated to know and love Indonesia. Patriotism is a very important principle of our education. We must eradicate the minds to teach "science to science" and replace it "the science of the homeland and the people". Third, a principal and urgent thing for every human being in the whole world was the question of peace. It was noble to love and strive for peace, to love your friends from any country.

Fourthly, we must educate our children and our youths to love science—wherever they are competing to pursue and develop knowledge, in whatever state it is based on scientific thinking. Where is the source of science and for what science is found? The universe contains an infinite law of science. Before man existed, natural laws had existed, but this natural law was not yet a science because man knew, pondered, summed up, and finally formulated it. The development of science was found by human beings based on their working practices in making direct or indirect contact with the facts and the reality of nature and its development, especially in relation to the production process. Science was discovered and developed by humans because

238 This was conveyed by Siswoyo in his speech on the night of introduction and inauguration of the founding of UNRA on Gedung SBKA, Jakarta, 25th September 1958.

239 This was conveyed by Siswoyo in his speech in the National Congress VI PKI, September 1959. Look at Bintang Merah Nomor Spesial II, (Jakarta: Yayasan Pembaruan, 1960), 587-588.
man needed it to improve his living standard, to keep his salvation. So, because the development of science was very dependent on humans, it separated the science from human interests, let alone use it to destroy the interests of human beings are evil, effort of knowledge and undermine the development of science. So, loving knowledge cannot be separated by human love because human beings are the creators of science.

Fifth, we must also educate children and youth to love father and mother. Every human being needs a harmony of life in his whole life, as well as in relationships with father-mother and vice versa from parents to his children. Thus, the alignment of life between mother and children is part of the absolute necessity of man. With these five answers Siswoyo increasingly explained the task of education, not only to educate the humans, but also morale and ethics, the type of workers.

In view of education, Siswoyo saw it in a typical Marxist perspective. Education could not be kept away from the main source of knowledge, which is man. Marxists said that human essence was work. Colonial-style education did not value the workers. Siswoyo criticized the educational orientation of capitalist style which only made men as labors with money as the goal. The understanding PKI must counter hegemony to the remnants of feudalism and colonialism should have an oriented education in the work class for the sake of a happy and prosperous life. There was an important role given by Siswoyo to education as the work of mass organizing in the field of culture.

Siswoyo also encouraged PKI to pay attention to the important issue in education that talked about teacher problems. In the PKI National Congress VI, September 1959, Siswoyo invited the PKI cadres to work in organizing among teachers. The party should be the mouthpiece for the teacher to solve his fate. About salary, retirement rights, and also have to think about the perfect educational system to solve reading materials, how to play, how to educate the educative for students.

Revolutionary education was born from a revolutionary teacher. A revolutionary teacher was he who could not place educational work outside or above class struggle. Interestingly, Siswoyo gave special attention to the teaching methods of teachers that so far were unchanged. That was because teachers did not have a vision or were bound to the ideals of the revolution. In this case, Siswoyo expected there should be teachers who possess and use educational and teaching methods with simple local language and animate and vibrant spirit. This revolutionary teacher can only smile, only to feel relieved that he had the belief that his protégé will become a happy Indonesia builder for the workers, love the homeland and the Indonesians, love parents, science and progress.

In order to achieve a revolutionary education, in every educational institution held by the PKI practiced “5 Cinta”240. First, love of work, was done by eliminating the way of verbal teaching. All lessons should give concrete understanding and give learners opportunities for practice. For example, in language lessons learners should get conversation practice, making and reporting. Besides, students and teachers must perform joint work activities, such as gardening. Second, the love of the homeland, by introducing the culture of tribes in the country. Third, peaceful love, done with the race on international days and sharpening on the subjects of history. Fourth, love science, giving learners to do experiment as widely as possible. Fifth, love father and mother, done by familiarizing children to help parents’ work.

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240 Answering Siswoyo's idea, in April 1962 held a Seminar of Communist Master by PKI Comite Jogjakarta.
On September 25, 1958, PKI established the University of the People (Unra). Located in SBKA building, Manggarai, Jakarta, the inauguration was attended by Minister of Education Prijono, PKI Leader D.N. Aidit and Siswoyo who were given responsibility managing Unra. In front of more than a thousand guests, Prijono opened his speech by conveying the condition of national education which at that time lack of facilities and educators. Prijono asserted that Unra was able to answer the life problems that were being experienced by the society. Unra was expected to be able to teach learners to master ways of working that ensure greater production.

Coming to 1958 Indonesia was hit by economic difficulties. The occurrence of inflation caused by budget deficits and low production and rapid destruction imposed on western economic institutions established in Indonesia. At the lower level, increased corruption was often the product of an increasingly excessive regulation. The number of government regulations had accelerated since 1958. That was because of prices, salary, rent, tariffs, crops and so on.

The establishment of Unra in Central Java began in 1960 need in response to economic difficulties, where people were unable to access education due to the cost of education and the limited number of schools. In Central Java, laborers, farmers and traders came to PKI after receiving news that it had previously held an education that taught reading, counting and other sciences. No charge and strict study time.

As a responsible person, Siswoyo outlined that Unra had a fundamental duty to educate the progressive person outside the party, as well as party members, about the theory of revolution and of other sciences. The targets of the students were mainly people’s organization activists. With expectation university of the people will participate donating his services in revolutionary education activities, in enhancing the level of knowledge of the theory of people's activists, in enhancing their love of science.

Despite the university’s first name, Unra was not only focused on higher education. But there were also elementary and junior high schools, many of them were adults. Unra university education was unlike most universities in general. It was very specific, and the target was also different from the school in general. Although the lessons were still based on the government school curriculum, Unra students were also given the subject of marxism lesson. While the students were devoted to the adults. For pre-primary education level called pra-Panra (Panti Pengetahuan Rakyat). It was a kind of literacy movement. Then, Panra for elementary school education. The junior high school level (SLTP) was called Bapra (Balai Pengetahuan Rakyat). Then for the level of senior high school level (SMA) was called Universitas Rakyat.

The political courses given in Unra included the history of the Indonesian independence movement, the history of the labor movement, and the history of the Indonesian revolution.

241 Speech of Prijono.
243 Interview with Ragil, organizer Unra Central Java.
244 Interview with Ragil.
245 Joko Waskito, *op.cit.*, 160.
Lessons that had an Indonesia orientation was very important. Teaching materials from Aidit's writings and other PKI leaders. In addition, Marxism education was taught to deliver learners to the concepts of philosophy, political economy and socialism of science. Marxism delivered in Unra greatly emphasized the practice embodied in every teaching by instilling communist morality that was, being honest, united, disciplined, loyal friends and willing to sacrifice. Unra students who were considered successful were those who practiced these communist moral principles.247

Unra learning process was not implemented every day. Lesson time and subject matter were actually more flexible to the conditions of teachers and learners. Especially for pre-Panra, intended to educate illiterate or semi-illiterate farmers. The teaching and learning process did not take place in school buildings or houses, often in huts and rice fields. Here the role of teacher was to actively approach students. The process of teaching and learning were done in the afternoon, after the farm workers finished their work in the fields. Learning method was discussion. Usually began with general knowledge subjects. For example, the agricultural issues, such as how to grow rice well. Then continued the political lesson. This was where the advantages, farmers could learn politics in the rice fields. This kind of learning did not exist in public and private schools.248

In September 1959, one year after Unra was officially established, they claimed that there were 2,816 students enrolled in 10 campuses in major cities of Indonesia. However, the lessons were far from satisfactory. In one sense, cadres at all levels attended and what would satisfy workers organizer at the provincial level would not appeal enough to a party leader in seeking higher theory knowledge. For others, lessons, usually taught three times a week late in the afternoon, took two years to complete, and few had the power to pass through. Busy cadres often had to skip course sessions, which meant that the class would progress slightly or progress slowly. Teachers whose numbers were never more than six or seven people, even in the larger schools-were usually party officers who took lectures at Unra as the work of many other jobs within their organization. Schools had nothing but buildings and equipment, and the reading materials were largely confined to the outline of the stenciled material and various party publications used as textbooks. In short, many reasons for a learner to become uninspired, and the amount dropped out of school increased quickly and alarmingly. In 1961 it became clear that the system was in serious trouble, and needed a radical change if it was to continue.249

In July 1963 a model of Unra (Unra Gaja Baru) was announced, and the leader of PKI, Aidit, became the chairman. The new style of unra was designed to respond to previous failures, offers much needed service and at the same time showed that communism could function when the state bureaucracy fails. This was part of a larger PKI campaign to show that the party knew how to solve Indonesia problems and therefore appropriate to be a source of government; and for PKI it was politically important that all party concern and resources were centered so that the new education system successful. In the 1963 reshuffle, Unra implemented a national plan for its system and called for that within four years there should be the founding of 6,809 primary schools, 1,263 secondary schools, and 22 high schools in big cities. This meant a great effort to get people capable to manage the schools and find the funds and materials they need. The first step proved to be a more difficult task, since in the school towns it was generally held

247 Interview with Ragil.

248 Joko Waskito, _op. cit._, 161.

249 Ruth McVey, _op. cit._, 28.
in party rooms or mass organizations, while in their villages often used local schools after waiting for hours; and a virtue had been declared that schools needed only simple equipment. Not to become a victim of perfectionism, Aidit underlined; if there was no building, we could go to school using ordinary equipment, and so if there was no can under the tree. And in 1965 a campaign was launched in order to raise funds for the writing and dissemination of school materials in Unra. Under the auspices of the central Unra, special institutions funding Unra were formed and made up of Unra cadres, representatives of revolutionary mass organizations, and “progressive entrepreneurs” as sources of fundraising. It was important to mention that progressive entrepreneurs like Chinese businessmen were expected to provide the majority of funds.  

Until April 1965, Unra noted there were 1,531 schools of Panpera, 463 Bapera and 88 Mipera. It was observed that although the number of elementary schools in the village were much below the limit for the expansion of the 4-year school system, Mipera schools, located in major cities, doubled from the intended outcomes. The main reason for this was that big cities were places where funds, potential staff, and high demand were existed. The pre-existing Unra schools were still attended by party cadres and mass organizations in search of higher qualifications, and the need for these schools remained the greatest in the eyes of party members, although Aidit stressed to focus on the farmers. In addition, rapid system expansion in many ways led rapid bankruptcy, especially at the level of Panpera and Bapera, where schools relied on the efforts of few people. Too often PKI supporters worked in “sleepwalking” or were tied to formalism, who set up schools for being urged by PKI leaders-raising funds, locating, searching for teachers, enrolling students, but never really clear that the impact was on the local community and was only aimed at establishing a school and why the school was entitled to their continued support. After the initial explosion, students were faced with the fact that the new institution will not bring a miracle overnight, and it also made support increasingly shrinking. The result was the “rat-tailed symptom” that once strucked Unra in the previous incarnation, in which the schools gradually trailed without becoming nothing. But even with these weaknesses Unra schools had an impact because they responded to people's demand for education and when teachers had ideological stock they would teach the average people with a view of the world that seemed to make their world sense.

CONCLUSION

Siswoyo was not raised in a strict academic family. In contrast to other movements emerged from the results of colonial higher education, both in Indonesia and in the Netherlands. The experience of physical revolution was an academic classroom that shaped his thoughts and attitudes. Although he was studying at the secondary level in Indonesia, Siswoyo gained knowledge of scholarship through the channels of political courses. Siswoyo followed in the footsteps of his predecessor. The culture of communist-breathing movements was born and evolved from revolutionary practices. Theory was read to understand the ideology that it believed.

This was the typical of the leadership of PKI by Aidit. The youth had a spirit of returning the PKI to the national and world political scene. The leaders of the PKI were

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250 Ibid., 33-34.
251 Ibid., 37.
encouraged by the reality of the Indonesian who were unwilling to return to the shadow of feudalism and colonialism.

Education seemed to make Siswoyo’s specialization, although Siswoyo also often paid attention to his thoughts on the way of the party organically. Prior to 1958, in the PKI the theme of education became the main subject of their conversations assigned to the division of agitation and propaganda. The existence of Siswoyo, education expanded its scope to reach the philosophical level and expand the scope of technical education for the mass.

Siswoyo’s education point of thinking lied in the critique of conservative thinking. The educational institutions of his time were still run without a vision and were often found to be still colonial-only creating skilled human beings. This was certainly inconsistent with the spirit of revolution that some people considered as the fight against imperialism which was just a slogan. Siswoyo set out the hardships of life experienced by workers-laborers and farmers.

Guided by an ideology based on Marxism-Leninism theories. The system of oppression experienced by the workers was produced because the imperialism style still maintained the education system. Therefore, Siswoyo demanded a pro-poor education. The task of national education must be in line with the objective of the August Revolution: to eliminate human oppression of man to its roots.

The university of the People was the tool. While the economic conditions were increasingly difficult and the fulfillment of the need for education implemented only by the state. Siswoyo encouraged people to move forward in the culture. Teach farmers to read, count and introduce them to political sciences. When their confidence had been restored, consciousness to complete the task of the August Revolution would be achieved. Although in the implementation of Unra was not perfect. Fund issues, incompetent personnel, until the case of fulfillment of facilities and infrastructure needs. But the intention of Siswoyo and PKI to facilitate the workers and peasants to be educated was something that the party and the mass organizations of the nationalist groups escaped at that time.

Creating educational institutions was a reflection of what PKI did in the post-revolution era. Although this institution did not last long because of the political genocide in 1965-1966, we can see and understand why PKI could have a mass base of millions during the 1950-1965 period. Through education, the masses felt valued as human beings and facilitated to achieve the ideals that already written in the proclamation of independence: a just and prosperous society.

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A. Archiv

B. Book


C. Interview

Ragil, Semarang, 14\textsuperscript{th} April 2017.
MEDIA FRAMING OF CHINESE PRIMARY SCHOOLS IN MALAYSIA’S LEADING PRINT MEDIA

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ABSTRACT

Ethnic concerns have long been characteristic feature of Malaysia’s educational system. Under national educational system, there are national primary schools teaching in Malay language (i.e. the national language) and national-type primary schools using Chinese or Tamil as medium of instruction. However, there has been long-standing debate over whether vernacular education should be abolished, replacing it with a single stream education system. The debate over whether multiple streams of primary schools can coexist and fit in with the state agenda of national integration continues to keep the ethnicity issue top of the national agenda and headline-grabbing news in media. In the similar vein, the media system in Malaysia is ethnic-oriented and seems to accord the primacy to articulation of specific ethnic concerns and interests over issues that matter most to their readerships. The present study analyses the framing of Chinese primary schools in the news coverage of Malaysia’s leading newspapers. A total of 555 news stories published throughout 2015 were content analysed. Results found the use of news frame on the reporting of Chinese primary schools varied among newspapers of different language streams depending on the ethnic orientation and the topics highlighted in the news. It is expected that the results of this study can contribute to the literature on news framing of education issue by providing a better understanding of the opportunities and challenges facing Chinese primary schools, which could serve as a consideration of the government policy-making process towards equitable development of public education at all levels.

Keywords: Ethnicity; Framing; Malaysia’s media system; National integration; Vernacular education

1. INTRODUCTION

Being regarded as a vibrant, multi-ethnic country, Malaysia is home to the indigenous Malay majority (68.8%) and non-Malay minorities of Chinese and Indians (23.2% and 7.0% respectively) (Department of Statistics Malaysia, 2017). The communal nature of society makes it unsurprising that it is through the lens of ethnicity to grasp the national policy agenda in major domains such as language and education, politics and administration, business licenses, etc. (Crouch, 2001; Haque, 2003). Ethnic concerns have long been characteristic feature of Malaysia’s educational system. Under national educational system, there are parallel government-funded schools of three language streams, i.e. national primary schools teaching in Malay language (i.e. the national language) and national-type primary schools using Chinese or Tamil as medium of instruction. All schools adopt a similar curriculum regardless of language
of instruction and Malay language is made a compulsory subject (Collins, 2006; Crouch, 2001). Vernacular schools teaching in mother tongue of ethnic minorities have always been the subject of much debate, with national integration a focal point. Tan and Sezali (2015) argue it has resulted in “the emergence and widening of ethnic divide in the Malaysian educational system” due to the detrimental effect it may have had on the nation-building process. In a similar vein, Santhiram and Tan (2010, p. 117) describe “these alternative streams [vernacular schools] have become competing rather than supplementary/complementary forces capable of challenging [Malay-medium] mainstream education.”

The debate over whether multiple streams of primary schools can coexist and fit in with the state agenda of national integration continues to keep the ethnicity issue top of the national agenda and headline-grabbing news in media. In August 2015, the newly appointed Deputy Prime Minister of Malaysia, Dr Ahmad Zahid during an interview with a local Malay-language daily, told the nation that the current vernacular school system should be abolished and replaced with “a universal system that goes beyond race and religion” (“Racial Unity Possible,” 2015). In doing so, Ahmad Zahid, also the vice president of the largest political party for Malays, UMNO (United Malays National Organization) was quoted as saying that “racial unity [is] possible [for the country].” Such news about ethnic-based education remarks by top office-bearer was deemed most newsworthy by many editors and it was quickly picked up by other news organizations for reaching the widest possible audience.

Debates flared in the media as news about the proposed change to national education system came to light. It was met with resistance from those who think that the nation shall respect the coexistence of different types of schools in multi-lingual set up which the constitution puts in place (Anisah, 2015). There is also a growing feeling of uneasiness among ethnic minorities, especially members of Chinese community, many of whom enrol their children in Chinese-medium schools. Under pressure from the general public, top gun of Chinese-predominated political party, MCA (Malaysian Chinese Association) was left without much choice but to reassure Chinese community that multi-lingual education will be uphold.

This range of voices over issue definition and interpretation as represented and reflected in media is oftentimes linked to a process of negotiation and contestation among competing aspirations of ethnic majority and minority groups. Aside from religion, education has been a challenging area of reporting given the sensitivity attached to Malay’s cultural dominance vis-à-vis claims for cultural autonomy of ethnic minorities. As Halimahton, Ngu and Rahman (2006, p. 185) succinctly put it, “the media have to constantly tread on precarious ground, balancing between what to write and how to write it” in a multi-cultural society abounds with religious and racial sensitivities. A similar view is expressed by Faridah, Chang and Kuik (2012, p. 9) by stating that the onus lies on media practitioners “to strike a careful balance between what to report and how to report [ethnicity issues].”

It is worth noting the tendency of ethnic-oriented media in Malaysia to accord the primacy to articulation of specific ethnic concerns and interests over issues that matter most to their readerships, e.g. the Moorthy and Nyonya Tahir cases (Halimahton, Ngu & Rahman, 2006); the keris polemics (Yang & Md. Sidin, 2014). In the meantime, the presence of dual constraints, i.e. ownership and legislation (Azizuddin, 2014; Brown, 2005; Mustafa, 2010; Steele, 2009; Wang, 2001; Weiss, 2012) inform these Malay-, Tamil-, and Chinese-language press, first and foremost, of their priority to keenly attune to the government’s developmental efforts and its
key ideological underpinnings irrespective of whose ethnic interests the media represent. Occasionally, the media find themselves on the horns of a dilemma and this becomes apparent in the challenge facing them, i.e. how to find the middle ground between bottom-up and top-down expectations (Faridah, Chang & Kuik, 2012).

The present study analyses the framing of Chinese primary schools in the news coverage of Malaysia’s leading newspapers. Research on the framing of national education issue is of great importance due to “the power of a communicating text” through an emphasis on content selection and salience (Entman, 1993) in relation to its potential implications for the government policy and public opinion.

2. METHOD

Frames in the news can be studied by means of systematic content analysis or more interpretive textual analysis alone (Weaver, 2007). Taking a quantitative content analysis approach, the present study examines a sample of news stories published between 1 January and 31 December, 2015. Three leading mainstream dailies from different language streams - Utusan Malaysia, The Star, and Sin Chew Daily were sampled for two reasons. First, these nationally distributed newspapers have a good reputation among the community they serve. Being the oldest Malay language press in Malaysia, Utusan Malaysia has always been perceived as the mouthpiece of UMNO. The Star and Sin Chew Daily are considered serious newspapers and both are popular among the well-educated professionals. Second, all sampled newspapers enjoy highest circulation rates as compared to others of that ilk. In the second half of 2016, Utusan Malaysia (with its weekend edition Utusan Mingguan) recorded a daily circulation of 406,537. The print circulation of The Star (including weekend edition Sunday Star) has a record of 440,209 copies daily and Sin Chew Daily’s circulation is 323,616 (Audit Bureau of Circulations Malaysia, 2017).

2.1. Data Sampling

The unit of analysis for this study was individual news stories consist of straight news, editorials, and opinion articles published throughout 2015 in the national news section of selected newspapers. This time period was selected because it coincided with several important events, including the royal call for English-medium schools, Chinese education movement leadership dispute, and the proposal to abolish vernacular schools. Only the items associated with Chinese primary schools and its related issues were included for analysis. To ease the search for news articles either through electronically browsing newspaper archives or manually searching physical newspapers, a number of keywords were identified and referred to following a review of literature. They include vernacular schools, vernacular education, mother-tongue education, language policy, multi-stream education system, and so on. The search yielded a total of 555 articles.

2.2. Coding Categorizations

The coding structure was separated into three parts – news character, news source, and news frame. In the first part, news character was measured from the aspects of amount of news and the type of articles. All items collected were coded into categories of straight news, editorials, and opinion articles. Next, the news sources refer to providers of information being quoted in newspaper articles which comprise “members or representatives of organized and unorganized interest groups, and yet larger sectors of nation and society” (Gans, 1979, p. 80). This source list included categories such as: 1) policy-makers (ruling coalition government, national and
local education authority); 2) opposition leaders; 3) stakeholder groups (interest groups, teacher unions, school committees, parents, pupils); 4) editorials, 5) opinion (letters to the editors, commentary writers), and 6) other.

News frame was based upon the five most-commonly used generic frames suggested by Semetko and Valkenburg (2000), namely conflict, human interest, consequences, responsibility, and morality. Their operational definitions are as follows:

1. Conflict – it focuses on conflict or difference of opinion between individuals, groups, or institutions as a way of courting audience attention.
2. Human interest – it brings an emotional angle to the issue; also refers to an attempt to personalize or dramatize the issue.
3. Consequences – it reports an issue in terms of consequences it will have on individuals, groups or country.
4. Responsibility – it presents an issue in such a way as to attribute responsibility for its cause or solution to either the government or individual or institution.
5. Morality – it relates an issue with religious tenets and moral prescriptions.

The presence of frame in news was measured based on yes-no categories in correspondence to five generic frames with 18-item scales (see Table 1). Human interest frame has five items and each “yes” answer to the item contributes 0.2 score. Responsibility frame has four items and each “yes” answer carries 0.25 score. There are three items for each conflict, morality, and consequences frames, and as such, each “yes” answer will contribute 0.33 score. If all items were ticked “yes” for a certain frame, the add-up scoring of “1” indicates the full presence of the particular frame. Contrary, the value of “0” indicates the absence of frame in news.

<table>
<thead>
<tr>
<th>Frames</th>
<th>Framing items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsibility</td>
<td>The news story suggests that some level of government has the ability to alleviate the problem.</td>
</tr>
<tr>
<td></td>
<td>The news story suggests that some level of the government is responsible for the issue/problem.</td>
</tr>
<tr>
<td></td>
<td>The news story suggests solution to the problem/issue.</td>
</tr>
<tr>
<td></td>
<td>The news story suggests that an individual or a group of people in the society is responsible for the issue/problem.</td>
</tr>
<tr>
<td>Human interest</td>
<td>The news story provides a human example or “human face” on the issue.</td>
</tr>
<tr>
<td></td>
<td>The news story employs adjectives or personal vignettes that generate the feelings of outrage, empathy-caring, sympathy or compassion.</td>
</tr>
<tr>
<td></td>
<td>The news story emphasizes how individuals and groups are affected by the issue/problem.</td>
</tr>
<tr>
<td></td>
<td>The news story goes into the private or personal lives of the actors.</td>
</tr>
<tr>
<td></td>
<td>The news story contains visual information that might generate feelings of outrage, empathy, caring, sympathy or compassion.</td>
</tr>
<tr>
<td>Conflict</td>
<td>The news story reflects disagreement between parties, individuals, groups or countries.</td>
</tr>
<tr>
<td></td>
<td>One part, individual, group or country reproaches another.</td>
</tr>
<tr>
<td></td>
<td>The news story refers to two sides or to more than two sides of the problem/issue.</td>
</tr>
</tbody>
</table>
3. RESULTS AND DISCUSSION

3.1. News Character

Table 2 shows that Sin Chew Daily devoted the highest proportion (245 items) to the issue of Chinese primary schools as compared to The Star (211 items) and Utusan Malaysia (99 items). All newspapers had a much higher ratio of straight news to the opinion pieces. The Chinese and English newspapers had very few items on editorial (1.2% and 1.4% respectively), but their Malay counterpart devoted no editorial opinion to the issue under study.

Table 2 News character

<table>
<thead>
<tr>
<th>News type</th>
<th>Sin Chew Daily</th>
<th>The Star</th>
<th>Utusan Malaysia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Straight news</td>
<td>213 (86.9%)</td>
<td>150 (71.1%)</td>
<td>81 (81.8%)</td>
</tr>
<tr>
<td>Editorials</td>
<td>3 (1.2%)</td>
<td>3 (1.4%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>Opinion articles</td>
<td>29 (11.8%)</td>
<td>58 (27.5%)</td>
<td>18 (18.2%)</td>
</tr>
<tr>
<td>Total</td>
<td>245 (100.0%)</td>
<td>211 (100.0%)</td>
<td>99 (100.0%)</td>
</tr>
</tbody>
</table>

3.2. News Source

Table 3 indicates that all newspapers focused strongly on the policy-makers as main source of news, especially top leaders of BN component parties. Sin Chew Daily devoted 38.0% news coverage to the stakeholder groups of Chinese education movement and Chinese guilds. The Chinese daily has also drawn material from a wide range of news sources as compared to its counterparts. As for the English and Malay dailies, both had allocated some space to opinion writers (27.5% and 18.2% respectively) and stakeholder groups (19.4% and 11.1% respectively). All newspapers devoted very few or no coverage to opposition leaders for their viewpoints on the issue under study.

Table 3 News source

<table>
<thead>
<tr>
<th>News source</th>
<th>Sin Chew Daily</th>
<th>The Star</th>
<th>Utusan Malaysia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy-makers</td>
<td>99 (40.4%)</td>
<td>96 (45.5%)</td>
<td>62 (62.6%)</td>
</tr>
<tr>
<td>Opposition leaders</td>
<td>7 (2.9%)</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>Stakeholder groups</td>
<td>93 (38.0%)</td>
<td>41 (19.4%)</td>
<td>11 (11.1%)</td>
</tr>
<tr>
<td>Editorials</td>
<td>3 (1.2%)</td>
<td>3 (1.4%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>Opinion</td>
<td>29 (11.8%)</td>
<td>58 (27.5%)</td>
<td>18 (18.2%)</td>
</tr>
<tr>
<td>Other</td>
<td>14 (5.7%)</td>
<td>13 (6.2%)</td>
<td>8 (8.1%)</td>
</tr>
<tr>
<td>Total</td>
<td>245 (100.0%)</td>
<td>211 (100.0%)</td>
<td>99 (100.0%)</td>
</tr>
</tbody>
</table>

3.3. News Frame

3.3.1. Sin Chew Daily
The Chinese newspaper employed the responsibility frame most frequently (40.8%) in the coverage of Chinese primary schools (see Table 4). For instance, it was reported that the education ministry should be held to blame for long-standing teacher shortage problem that plagues Chinese primary schools. Chinese education movement blamed the former for not taking the job seriously (“Jiao Zong: Decades-old Teacher Shortage Problem,” 2015). Despite Chinese educationalist criticism, Deputy Education Minister Chong Sin Woon said that the education ministry will be sending enough trained teachers to fill the vacancies and he expected the problem will be solved in the next school year (“Chong: No Teacher Shortage,” 2015).

In response to claims that vernacular education does more harm than good, one opinion writer explicitly blamed ethnic politics for causing and promoting racial disharmony. He mentioned the ethnic-based political parties hardly move beyond a dichotomous view of “us” and “them” in efforts to mobilize support and loyalty of voters and members to their advocated position. The vernacular school system has always been an easy scapegoat to blame for wider problems under such circumstances, he added (Zhang, 2015). Editorial board of Sin Chew Daily has referred to a Malay proverb “jangan cakap tak serupa bikin” to remind UMNO top leaders walking the talk by assuring the Chinese community that vernacular schools will continue to exist (“Editorial: Jangan Cakap Tak Serupa Bikin,” 2015).

More than one-fourth of the articles were structured in conflict terms (26.9%). A considerable amount of coverage was concentrated on one of the most respectful education movement groups - Dong Zong controversy between two rival camps, one led by former president Yap Sin Tian and the other by reformist group linked to secretary-general Poh Chin Chuan. The bitter feud over power struggle ended with a new committee line-up recognized by the Selangor Registrar of Societies. The language of medium policy pertaining to the proposal to unify Bahasa Malaysia curriculum and examination format for national and vernacular schools, on the other hand has led to the ire on the part of Chinese community. Debates flared in the media and it was met with resistance from MCA leaders and Chinese education movement who think that the nation shall respect what was laid out in the Malaysia Education Blueprint (“Wee: BM Textbooks,” 2015).

The consequences framing (23.7%) occurred when editorial and opinion writers called the leadership dispute involving Chinese education movement came at an incredibly high price with far reaching consequences. They expressed deep dissatisfaction and disappointment over the incident and unanimously described the long-drawn dispute as bringing shame to the Chinese community. One opinion article pointed out Dong Zong was no longer an object of pride as the leadership crisis threatened to push Chinese education to the brink of collapse and tarnished the Chinese educationalists’ image (Zheng, 2015). The human interest and morality frames were the least employed (4.5% and 4.1% respectively).

3.3.2. The Star
Responsibility and consequences frames carried equal weight (36.0%) in the coverage of Chinese primary schools. Through responsibility frame, the authorities were urged to step up efforts to ensure the survival of vernacular schools and to address a host of unsolved problems relating to teaching force and government finance. For instance, MCA Vice President Chew Mei Fun, referring to financial assistance to schools, urged the government not to sideline schools led by MCA members (Chong, 2015). When opening BN component party Gerakan’s national delegates conference, Prime Minister Najib gave his assurance that the vernacular schools will continue to exist as they are part of the country’s social contract (Kanyakumari &
Chan, 2015). Top leaders of MCA and Chinese educationalists lauded Prime Minister’s assurance for keeping with the social contract agreed by the country’s founding fathers.

The consequences frame was visible in the response to the Sultan of Johor’s call for a single-stream education system with English as the language of instruction. The royal call received an overwhelming support across stakeholder groups mainly those English-educated parents and teachers who were concerned with the poor language proficiency among students. Editorial board of The Star also stressed a need to equip students with language skills as “there is no denying that it is the English language that holds the key” (“Knowing English,” 2015).

Through conflict frame (15.2%), it was reported that former Prime Minister Dr Mahathir disagreed to reintroducing English-medium schools but maintained that Science and Mathematics should be taught in English (“Teach Maths and Science,” 2015). The controversial language policy - teaching and learning of Mathematics and Science in English (PPSMI) was introduced in 2003, by Dr Mahathir-led administration. However, in just six years after its implementation, the government called a halt to the English medium of instruction policy and reversed to Malay language. It is worth noting that 8.1% of the articles were structured in human interest term that appealed to emotion. A few articles highlighted how successful non-Chinese were by being well-versed in Mandarin. For example, a famous Chinese television presenter, popularly known as Baki was quoted as saying that “being in Malaysia, you know how awesome it is that the majority know two to three languages? It’s just that sometimes we are too intimidated to say that we know these languages” (Brown, 2015).

3.3.3. Utusan Malaysia
The consequences frame prevailed in the Malay language newspaper’s coverage of the issue under study (37.4%). Substantial coverage focused on whether the initiatives as laid out in Malaysia Education Blueprint 2013-2025 had effectively achieved the intended outcomes. For instance, it was reported that two years after the blueprint was implemented, positive changes have been made. The then Education Minister Muhyiddin Yassin told all parties not to become complacent but to continue to give full commitment in making sure best results are achieved in every transformation initiative (Mohd. Asron & Sofian, 2015).

The responsibility frame (29.3%) was used in relation to the dominant Malay language status and the proposal of setting up a single-stream education system to foster national unity. Ministers, politicians, academicians, and Malay interest group spoke out for the proposal. Principal Fellow of Universiti Kebangsaan Malaysia’s Institute of Ethnic Studies (KITA) Dr Teo Kok Seong was quoted as saying that a need to address disunity among Malaysians through the concept of Gagasan 1Malaysia (“Set Up Single-stream Education System,” 2015). An opinion writer urged the country to look up to those advanced countries including Thailand and Indonesia as models to emulate their success in developing national character through a single-stream education system (Rejab, 2015).

It is worth noting that the newspaper devoted slightly more than one-fifth of its news page to the morality framing (20.2%). Attention was paid to the ways to showcase appreciation of teachers for their contributions to the society. One opinion writer also offered his ideas and tips for increasing quality family time (Mohd. Razi, 2015).

Table 4 News frame
<table>
<thead>
<tr>
<th>News frame</th>
<th>Sin Chew Daily</th>
<th>The Star</th>
<th>Utusan Malaysia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conflict</td>
<td>66 (26.9%)</td>
<td>32 (15.2%)</td>
<td>7 (7.1%)</td>
</tr>
<tr>
<td>Human interest</td>
<td>11 (4.5%)</td>
<td>17 (8.1%)</td>
<td>6 (6.1%)</td>
</tr>
<tr>
<td>Consequences</td>
<td>58 (23.7%)</td>
<td>76 (36.0%)</td>
<td>37 (37.4%)</td>
</tr>
<tr>
<td>Responsibility</td>
<td>100 (40.8%)</td>
<td>76 (36.0%)</td>
<td>29 (29.3%)</td>
</tr>
<tr>
<td>Morality</td>
<td>10 (4.1%)</td>
<td>10 (4.7%)</td>
<td>20 (20.2%)</td>
</tr>
<tr>
<td>Total</td>
<td>245 (100.0%)</td>
<td>211 (100.0%)</td>
<td>99 (100.0%)</td>
</tr>
</tbody>
</table>

4. CONCLUSION

The results show consistency across the three newspapers in terms of level of attention given to straight news and a much higher ratio of straight news to opinion pieces. There was slight variability in proportion of coverage given to editorial opinions, with *Utusan Malaysia* had no editorial on the issue under study. The concentration in hard news can be attributed to the serious nature of newspapers that tend to present more current issues in politics, economics, etc. that are significant to their readers. The editorials and opinion articles contribute to yet another distinctive platform for articulating institutional and elite debate surrounding important issues (Golan & Lukito, 2015) other than straight news. The issue of Chinese primary schools was prominent in *Sin Chew Daily*, suggesting that the newspaper was an important cultural source by its community. It also reflects the interdependence of Chinese press, Chinese education, and the Chinese society at large to co-construct community interests in a multi-cultural society (Samuel, Khan, Lee & Cheang, 2012).

As for sourcing practice, all sampled newspapers have taken over the points of view by ruling coalition in a seemingly uncritical manner and contrastingly the dissenting voices were hardly seen or heard in both Malay and English newspapers. A diversity of news sources used by the Chinese daily may seem to reflect the journalistic professionalism of objectivity for which editors and journalists are committed towards unbiased, non-partisan reporting (Bennett, 2009; Shoemaker & Reese, 2014). However, there is a fine line between objectivity and bias and it is almost impossible for journalists to defend against possible sources of influences in news production. The close media-ruling party relationship and highly regulative media environment have posed great obstacles to mainstream media as the latter inclines to comply with the government’s wishes and serve the hegemonic function of those in power (Mustafa, 2006; 2014). Empirical evidence in studies by Yang and Md. Sidin (2012), Ihediwa and Md. Sidin (2015) supported the notion of the coverage of different issues by mainstream media tilted towards government sources.

The use of news frame on the reporting of Chinese primary schools varied among newspapers of different language streams depending on the ethnic orientation and the topics highlighted in the news. The Chinese newspaper predominantly used responsibility frame by putting the onus on the BN-led government to resolve problems of teacher shortage, over-crowding in urban Chinese primary schools, and the allocation of development funds. Contrary, consequences frame was mostly used in the Malay press by highlighting positive outcomes resulting from the successful implementation of education transformation initiatives, but little mention was made about problems affecting Chinese schools. Interestingly, the English newspaper with its mostly English-educated, ethnically more diverse readership employed both the consequences and responsibility frames to highlight the plights of Chinese primary schools and the impact of poor English proficiency on the social-economic development of the country.
Previous studies have shown the role perceptions by journalists would determine the way journalistic values and practices to be carried out in their routine news gathering process (Ezhar & Ain Nadzimah, 2015; Shao & Nik Norma, 2014). Yang and Ahmad Ishak (2015) also asserted the mainstream media performed more of a surveillance function rather than a correlation one corresponding to communal-based readership. Given the ethnic orientation of these media, it is not surprising to find that ethnic issues will continue to make their heavy presence on the media agenda.

The present study can contribute to the literature on news framing of education issue by providing a better understanding of the opportunities and challenges facing Chinese primary schools, which could serve as a consideration of the government policy-making process towards equitable development of public education at all levels. Future study can build upon this work by including online alternative news to capture the overall media representation of Chinese primary schools. It would also be interesting to incorporate interviews with policy-makers, stakeholders, and journalists and compare them with media frame to provide a more comprehensive understanding of how frames emerge and embed in the news.

5. REFERENCES


SHAPING THE BETTER WORLD THROUGH EDUCATION: INSTRUCTIONAL LEADERSHIP & SCHOOL IMPROVEMENT

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ABSTRACT

This study aims to investigate teachers’ perception on the role of principals’ instructional leadership and school improvement. The core of an instructional leader in an educational organization is to assure that all students receive quality instruction on a regular basis. Hence, it will improve teachers’ and students’ teaching and learning processes. Instructional leaders should have good competence and efficient responsibility to achieve the purpose of quality education. Therefore, the main purpose of this study is to identify the relationship between instructional leadership style of school principal and its impact on school’s improvement. This study used a qualitative research design and data was collected randomly from 100 public primary school teachers in Selangor state, Malaysia. The collected data were analysed using SPSS software(V. 23.0). Both descriptive analysis (percentage, frequency, mean& standard deviation) and inferential statistical analysis (Pearson correlation and t-test) were used in analyzing the variables concerned. To establish the reliability of the items a Cronbach’s Alpha test of internal consistency was used in this study. Finding indicates there is a significant relationship between instructional leadership role of principals and school improvement. More over results show that principals strategies in regard to school improvement are in line with the domains of instructional leadership theory including: frame and communicate school goals, supervise and evaluate instruction, coordinate curriculum, provide incentive for teachers, promote professional development, and provide incentive for learning. The results of this research can be beneficial for the Ministry of Education, school leaders, educational organizations and teachers.

Keywords: Instructional leadership; School improvement ; Principal; Teachers; Primary education; Malaysia

1. INTRODUCTION

Instructional leadership practice is a vital element in educational management in pursuit to improve the teaching and learning processes (Sekhu, 2011). Instructional leadership can be defined as the action of a school leader undertaking or distributing tasks to academic staff towards improving teaching and learning. Instruction that are delivered to the best of a principal’s ability stands as their top priority in line with the school’s vision and mission (Hallinger, 2003). The key task for instructional leaders is to ensure that all students receive effective quality of instruction and all teachers doing well in their teaching practices every day. So that, there will be an improvement in the value of teaching and learning processes which results to school improvement.
Instructional leadership is also where the principal as the school leader, shares accountability, academic development and monitoring of the organizational tasks with the academic staff. In this regard, the school principal is not the only instructional leader; instead he/she is the “leader of instructional leaders” (Glickman, 1989; Sekhu, 2011; Leithwood et al., 2004).

Theoretically, instructional leadership includes all the tasks that a school principal does on a daily basis to affirm the accomplishment of students’ learning and the capability of teachers’ teaching (Supriadi, & Yusof ,2015). According to Hallinger (2008) leaders in effective schools, practices instructional leadership in the both ways. The teaching and learning quality in such schools will be effective and efficient. Besides, as an instructional leader, the principal also should know how to create positive attitude, enhance performance as well as identify and resolve weaknesses among teachers. For example, providing training programme to help teachers’ professional development is one of the key task for instructional leadership practices of schools principal.

Moreover, instructional leaders need to show a good communication skill among the subordinates. Communication is a tool of success in any organization; it will help the organization to achieve the vision and mission of the organization (Rahimah & Ghavifekr, 2014). In addition, communication will help the teachers to enhance their ‘professional communication skills and development’ which is a key to improve teaching proficiency (Sekhu, 2011 ;Hallinger,2008; ). According to Hallinger (2003) school achievement is depends on the leadership practice of the school principal to improve relationship between him/her self and and teachers.

Ministry of Education (MOE) has launched Malaysia National Education Blueprint (2013-2015) in December 2012 with the primary objective to understand the current challenges in schools’ performance. The attempt was through focusing on raising standards by closing the achievement gaps and maximizing education system efficiency. MOE has focused more on investing supports and resources to help principals and teachers in implementing effective teaching and learning environment for the schools’ improvement (Rahimah & Ghavifekr, 2014).

In Malaysia, school leaders are known as school’s principal who are responsible for the development and implementation of curriculum and co-curriculum in line with MOE policies. Principals also are responsible for all matters related to the management, administration and finance of their school. The transformation plan in the recent Malaysian Education Blueprint (2012-2025), is to ensure to develop and train more instructional leaders in schools. Accordingly, principals will be given more flexibility in making decisions involving school improvement.

More studies has shown that, school principals are more involved in administrative matters rather than instructional matters in terms of teaching and learning (Ghavifekr & Ibrahim ,2014). Previous research dispute that school improvement is truly depends on the school leaders’ leadership style. Evidence from South Africa shows that, school performance dropped from 2009-2010 due to practice of instructional leadership style of principals (Sekhu 2011). Previous research (Leithwood, Louis, Anderson & Wahlstrom, 2004; Alig-Mielcarek, 2003; Ruff &
Shoho, 2005), indicate that the influence of instructional leadership practices towards school improvement, remains vague. This is because, school leaders are more focused in completing school’s daily tasks such as administrative and managerial job, rather than spending enough time to implement instructional leadership practice (Ruff & Shoho, 2005; Supriadi, & Yusof, 2015). Therefore, the purpose of this study is to identify the relationship of school principal’s instructional leadership practice and its influence on school improvement. In this study the teachers perception is taken into consideration to ascertain the principal’s instructional roles and how it affects a school’s progress. This study aims to achieve the following objectives:

a) To examine the role of principals’ instructional leadership in public primary schools in Selangor
b) To identify the relationship between principals’ instructional leadership functions and school improvement in public primary schools in Selangor

2. THEORETICAL BACKGROUND & HYPOTHESIS DEVELOPMENT

School leaders need to possess various sets of leadership skills than initially needed. It is deduced that schools can improve if principals decrease the traditional leadership means, and instead take on instructional and transformational leadership approaches (Supriadi, & Yusof, 2015; Hallinger, 2008).

Instructional leadership is widespread in the educational leadership writings and often used correspondingly with distributed and transformational leadership. Consequently, instructional leadership is seen as the framework for emulation by principals for its role in supervising, guiding and modeling. According to Hallinger and Murphy (2012), the instructional leadership model has three major elements which are, establishing school mission, managing instructional events, and creating a constructive or positive school ethos. This is in line with Alig-Mielcarek, (2003) observation that effective instructional leadership in a school strategizes school goals, formulate action plans and accomplish and assesses in a credible fashion. In this study, these elements can be seen as i) the instructional leaders frames and communicates school goals, ii) supervise and evaluates instructions iii) coordinates the curriculum, iv) monitor students’ progress, v) provide incentive for teachers and vi) promotes professional development besides vii) providing incentive for learning.

Hopkins (2003) notes that instructional leadership is portrayed through collegiality among school staff and principals, in the pursuit of improving the standards of teaching and learning and consequently school improvement at large. Figure 1 below, exhibits the theory of instructional leadership proposed by Hallinger and Murphy (2012).
A conceptual framework that represents the course of this study displays the instructional leadership as leading through achievement, affiliation and authority towards school improvement. The model below (Figure 2) illustrates the study’s conceptual framework. Accordingly, a school leader that practices characters of an instructional leadership is also driven by achievement motivation. This, in return affects school improvement as it does teachers and students. As a result, the school community at large is motivated by the principal’s instructional leadership qualities and achievement motivation that consequently ends with school achievement and development. This is in line with McClelland et al. (2007) research that indicates school heads are able to influence students’ and teachers’ motivation by developing an instructional school climate. This is because students, teachers and the society at large are affected by effective instructional management of the school leader. However, motivation and instructional leadership on the part of the school leader can evolve into motivating staff and students through the operation of goals, and thus leading to school achievement.
For the purpose of this study, the research objectives provide guidance into identifying the roles of a school leader in terms of instructional leadership and seek the relationship between the independent variable that is the instructional leadership and the dependent variable, which is school achievement. The following hypothesis is developed in consistence of the research objectives:

**Ho**: There is no relationship between a principal’s instructional leadership and school achievement.

**Hi**: There is a relationship between a principal’s instructional leadership and school achievement.

3. METHODS

3.1 Research Design

In this study, the researcher used a quantitative research method to determine the relationship among the variables. Accordingly, she primarily used post-positivist approach for developing knowledge such as cause and effect thinking, reduction to specific variables to answer research questions. The researcher then, employed strategies of inquiry such as survey questionnaire, and collected data on predetermined instruments that yield statistical data. The independent variable in this study includes the role of the instructional leadership practice of school principal, whereas the dependent variable is school improvement. Research questions steering this research calls for a quantitative approach since this research is looking to quantify the relationship between the two said variables and further analysis.
3.2 Population and Sampling

The population for this study includes all public primary teachers in Selangor state, Malaysia. Therefore, a simple random sampling was used to distribute the questionnaires to the teachers and finally 100 were returned. According to Creswell (2012), simple random sampling is the more frequently used form of prospect sampling in which researchers is able to choose respondents from a school so that random individuals can participate in the study.

3.3 Instrument

An examined survey questionnaire with a total of 42 items called “Principal Instructional Management Rating Scale” (PIMRS) adopted from Hallinger (2008) was used to collect data for this study. A total of 150 questionnaires were distributed to teachers from 10 public primary schools randomly. Respondents were asked to read the statements given and choose their answers based on 4-Likert scale ranged from 4= Strongly Disagree, 3= Disagree, 2= Agree and 1= Strongly Agree. The questionnaires were consisting of 3 main sections. Section A is about the demographic background of the respondents consists of 4 items that includes gender, age, teaching experience, and highest academic qualification. Sections B consists of 4 sub-sections of (i) frame and communicate the school goals, (ii) Supervise and evaluate instructions, (iii) coordinate the school curriculum, (iv) monitor students’ progress, presents principals’ instructional leadership practices towards instructional improvement. Finally, Section C which is related to principals’ instructional leadership practices towards teaching improvement, also has 3 sub-sections of (i) providing incentives for teachers, (ii) promoting professional development, and (iii) providing incentives for learning.

3.3.1. Reliability and validity

Reliability analysis was conducted in order to ensure the internal validity and consistency of the items used for each variable. Cronbach's alpha (α) was used for this test. George and Mallery (2003) recommended that Cronbach’s alpha value less than 0.5 are unacceptable, while 0.6 is are deemed questionable. An alpha of more than 0.7 would indicate that the items are homogeneous and measuring the same constant. The overall reliability of the instrument was found to be 0.924 (N=100) which is considered excellent. Table 1 shows the reliability of the measurement scales.

Table 1: Reliability score of PIMRS

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructional leadership practices of principals</td>
<td>0.924</td>
</tr>
</tbody>
</table>
3.4. Data Collection

Creswell (2012) highlights two facets as a standard practice when collecting data, which is the usage of customary procedures and ethical policies. On that account, the PIMRS (Hallinger, 2008) was employed to collect quantitative data for the seven domains presented in this research including: frame and communicate school goals, supervise and evaluate instruction, coordinate the curriculum, monitor students’ progress, provide incentive for teachers, promote professional development and provide incentive for learning. It was then delivered to 100 public primary school teachers in Selangor. The data was collected within 2 weeks through random distribution and some of the questionnaires were sent to respondents email. The respondents were given 3-5 days to complete the questionnaire and send it back to the researcher for data analysis. After 2 weeks, all the complete filled-up questionnaires were gathered and collected for further data analysis by the researcher to get the output and findings for the research.

3.5. Data Analysis

In this study, data was keyed in into SPSS (v. 23) statistical analysis software. Descriptive and inferential statistics was used to analyse the data collected. Firstly, to analyze data, each item in the questionnaire was assigned a value. For the purpose of answering research question 1, descriptive statistical analysis was used to score the demographic profile of respondents in percentages, and frequency, as well as the level of principals instructional leadership practices in terms of mean and standard deviation. Following that, to answer research question 2, a correlational analysis was used to identify the relationships among variables. This is to mainly test the hypothesis for the second research question.

4 FINDINGS

4.1. Demographic Information of the Participants

The demographic data of the respondents was retrieved via Section A includes information on gender, age, education qualifications and years of service measured by the year of service, attained by the teachers. Table 2 below, describes the demographic profile of the respondents:

<table>
<thead>
<tr>
<th>Variables</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>48</td>
<td>48%</td>
</tr>
<tr>
<td>Female</td>
<td>52</td>
<td>52%</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31 – 40</td>
<td>28</td>
<td>28%</td>
</tr>
</tbody>
</table>

Table 2: Demographic data of the respondent (n=100)
41 – 50  57  57%
51 – 60  15  15%

Teaching experience
1 -10  61  61%
11 - 20  27  27%
21 - 30  9  9%

Highest Academic Qualification
Bachelors  41  41%
Masters  54  54%
PhD  5  5%
Total  100

As shown in Table 2 from the total of 100 respondents in the survey, the findings indicated that 48 % of the respondents were male, and 52 % were female. This result mirrors the current situation of the Malaysian public primary schools, whereby generally there are more female teachers than male.

The result also show that the minority of respondents' age is belong to group of 51 to 60 years old with 15 teachers (15 %), and the majority of 57% of them within 41-50 years. Moreover, 28 % of participants fall within the 31-40 years.

Of the sample size, 61 % have taught between 1 to 10 years, 27% between 11 to 20 years, and 9% between 21 to 30 years.

On the educational background of the respondents, 41% are holding a bachelor’s degree, while 51 % are holding a master’s degree, and only 5 % holding PhD. This is in line with the government’s vision to upgrade teachers’ academic qualifications.

4.2. Role of Principals’ Instructional Leadership towards School Improvement

To answer research question one principals’ instructional leadership role was examined based on 2 categories of; i) instructional improvement, and ii) teaching improvement. Tables 3-9 present the details on these practices as follow:

4.2.1. Principals’ Instructional Leadership Practices towards Instructional Improvement

According to the teachers, the roles of school leaders shown high level of instructional leadership characteristics in the four main domains as (i) frame and communicate the school goals, (ii) Supervise and evaluate instructions, (iii) coordinate the school curriculum, (iv) monitor students’ progress. Tables 3- 6 presents the details on the statistical analysis as follow:
Table 3: Instructional Improvement (Frame and Communicate the School Goal)

<table>
<thead>
<tr>
<th>No</th>
<th>Items</th>
<th>Scale (%)</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1</td>
<td>Frame the school’s academic goals in terms of staff responsibilities for meeting</td>
<td>44</td>
<td>56</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>Use data on student performance when developing the school’s academic goals</td>
<td>51</td>
<td>49</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>Develop goals that are easily understood and used by teachers in the school</td>
<td>36</td>
<td>63</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>Communicate the school’s mission effectively to members of the school community</td>
<td>38</td>
<td>62</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>Ensure that the school’s academic goals are reflected in highly visible displays in the school (e.g., posters or bulletin boards emphasizing academic progress)</td>
<td>44</td>
<td>50</td>
<td>6</td>
<td>-</td>
</tr>
</tbody>
</table>

On frame and communication of school goals, 44% of the respondents strongly agreed that their principals, frame the school’s academic goals in terms of staff responsibilities for meeting. None of the respondent disagree on this question, and the mean and standard deviation scores are 1.56 and 0.499 respectively. In addition, 51% of the respondents strongly agreed that their principals use data on students’ performance when developing the school academic goals and none of them disagreed on this item. This shows a mean of 1.49 and standard deviation of 0.502. Also, 36% of the respondents strongly agreed that their principals develop goals that are easily understood and used by teachers, 63% agreed, while only 1% disagreed on this item. This reveals a mean of 1.65 with a standard deviation of 0.50. Furthermore, 38% of the respondents strongly agreed that their principal communicate the school’s mission effectively to members of the school community and 62% agreed on this item. None of the respondent disagreed. This shows a mean and standard deviation of 1.62 and 0.488 respectively. Finally, 44% of the respondents strongly agreed that their principal ensures that the school’s academic goals are reflected in poster or bulletin highly visible display in the school, 55% agreed, 6% disagreed, and none strongly disagreed. This shows a mean score of 1.62 and a standard deviation score of 0.599. In conclusion, a close looks at the results presented in Table 3, shows that more respondents agreed with these items. This implies that school principals frame and communicate their school goals effectively as a way of improving instruction in schools.

Table 4: Instructional Improvement (Supervise and Evaluate Instruction)
Table 4 above presents the views of respondents on instructional improvement based on supervision and evaluation of instruction. There are four items under this heading. On the first item, 49(49%) of these respondents strongly agreed that their principal ensures classroom priorities of teachers are consistent with goals and directions of the school, while 51(51%) of these respondents agreed on this item and none disagreed. This shows a mean score of 1.51 with a standard deviation score of 0.502. Furthermore, 42(42%) of these respondents strongly agreed that their principal review students’ work products when evaluating classroom instruction while 53(53%) agreed. 5(5%) of these respondents disagreed on this question and none strongly disagreed. This shows a mean of 1.63 and a standard deviation of 0.580. Commenting on the third item shown in Table 4, 53(53%) of these respondents strongly agreed that their principals conduct informal observations in classrooms on a regular basis (informal observations are unscheduled last at least 5 minutes, and may or may involve written feedback or a formal conference) while 47(47%) agreed and none disagreed. This reveals a mean of 1.47 and standard deviation of 0.502. Finally, 45(45%) of the respondents strongly agreed that their principals point out specific strengths and weaknesses in teachers’ instructional practices in post-observation feedback, 50(50%) agreed, 5(5%) disagreed, while none of them strongly disagreed. This shows a mean of 1.60 and a standard deviation of 0.586. In conclusion, the analysis presented in Table 4 above shows that more of these respondents agreed that their principals take in effective supervision and evaluation as way of improving instructions in school.

Table 5: Instructional Improvement (Coordinate the Curriculum)
Table 5 above shows the coordination of curriculum by school principals as a way of improving instruction in schools. It consists of five items. 44(44%) of the respondents strongly agreed that their principals make clear who is responsible for coordinating the curriculum across grade levels, 52(52%) agreed, 4(4%) disagreed while none strongly disagreed. This item shows a mean of 1.60 and standard deviation of 0.569. Similarly, 53(53%) of the respondents strongly agreed that their principals draw upon the results of school-wide testing when making curricular decisions, 43(43%) agreed, 4(4%) disagreed while none strongly disagree. This reveals a mean of 1.51 and standard deviation of 0.577. Moreover, 46(46%) of the respondents strongly agreed that their principals monitor classroom curriculum to see it covers the school’s curricular objectives, 49(49%) agreed, 5(5%) disagreed and none strongly disagreed. This shows mean and standard deviations scores of 1.59 and 0.588 respectively. In addition, 40(40%) of these respondents strongly agreed that their school principals assess the overlap between school’s curricular objectives and school’s achievement tests, 52(52%) agreed, 8(8%) disagreed and none strongly disagreed. This indicates a mean of 1.68 and standard deviation of 0.618. Finally, 38(38%) of the respondents strongly agreed that their principals participate actively in the review of curricular materials, 54(54%) agreed, 8(8%) disagreed and none strongly disagreed. This shows mean and standard deviation of 1.70 and 0.611 respectively.

In summary, a critical analysis of the responses provided above shows that large percentage of the respondents are in favour of this heading than those against it. Therefore, this study found that school principals show effective coordination of curriculum as a measure for improving instruction in schools.

Table 6: Instructional Improvement (Monitor Students’ Progress)
Table 6 reveals the result of the respondents on the monitoring role of their principals. 39(39%) of these respondents strongly agreed that their principals meet teachers individually to discuss student progress, 54(54%) agreed, 7(7%) disagreed while none strongly disagreed. This implies a mean of 1.68 and standard deviation of 0.601. Moreover, 39(39%) of the respondents strongly agreed that their principals use tests and other performance measure to assess progress towards school goals, 60(60%) agreed, 1(1%) disagreed and none strongly disagreed. This shows a mean of 1.62 and standard deviation of 0.508. Also, 54(54%) of these respondents strongly agreed that their principals inform teachers of the school’s performance results in written form (e.g., in a memo or newsletter), 50(50%) agreed and none disagreed on this item. It shows mean of 1.50 and standard deviation of 0.503. Overall, it shows that majority of the respondents agreed that their principals monitor students’ progress as a way of improving instruction in primary schools.

4.2.2 Principals’ Instructional Leadership Practices towards Teaching Improvement

The results also shows that the principals uses instructional leadership behaviors and possess positive relationship with the school stakeholders specifically teachers and students for the purpose of teaching improvement through (i) providing incentives for teachers, (ii) promoting professional development, and (iii) providing incentives for learning. The details on the statistical analysis of these domains are presented in Tables 7-10 respectively:

Table 7: Teaching Improvement (Provide Incentives for Teachers)
Table 7 above shows the result of the respondents on principal ability to provide incentive to teachers as a measure of improving teaching in primary schools. On the first item, 42(42%) of the respondents strongly agreed that their principals reinforce superior performance by teachers in staff meetings, newsletter and memos, 58(58%) agreed, while none disagreed. This reveals a mean score of 1.58 and standard deviation of 0.496. In addition, 30(30%) of these respondents strongly agreed that their principals compliment teachers privately for their performance or effort, 67(67%) agreed, 1(1%) disagreed while 2(2%) strongly disagreed. This show mean of 1.75 and standard deviation of 0.575. Also, 33(33%) of the respondents strongly agreed that their principals acknowledge teachers’ exceptional performance by writing memos for their personal files, 53(53%) agreed, 12(12%) disagreed and 2(2%) strongly disagreed. It reveals mean of 1.83 and standard deviation of 0.711. Similarly, 33(33%) of the respondents strongly agreed that their principals reward special effort by teachers with opportunities for professional recognition, 53(53%) agreed, 12(12%) disagreed and 2(2%) strongly disagreed. This also shows mean of 1.83 and standard deviation of 0.711. Finally, 37(37%) of these respondents strongly agreed that their principals create professional growth opportunities for teachers as a reward for special contributions to the school, 51(51%) agreed, 12(12%) disagreed and none strongly disagreed. This reveals mean of 1.75 and standard deviation of 0.657. In conclusion, the result shows that more respondents agreed that their principals provide incentives for teachers as a way of improving teaching and instruction.

Table 8: Teaching Improvement (Promote Professional Development)
II. Promote professional development

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
<td>Ensure that in-service activities attended by staff are consistent with the school’s goals</td>
<td>23</td>
<td>77</td>
<td>-</td>
<td>100</td>
<td>1.77</td>
</tr>
<tr>
<td>30</td>
<td>Actively support the use in the classroom of skills acquired during in-service training</td>
<td>30</td>
<td>61</td>
<td>9</td>
<td>100</td>
<td>1.79</td>
</tr>
<tr>
<td>31</td>
<td>Obtain the participation of the whole staff in important in-service activities</td>
<td>38</td>
<td>60</td>
<td>2</td>
<td>100</td>
<td>1.64</td>
</tr>
<tr>
<td>32</td>
<td>Lead or attend teacher in service activities concerned with instruction</td>
<td>39</td>
<td>61</td>
<td>-</td>
<td>100</td>
<td>1.61</td>
</tr>
<tr>
<td>33</td>
<td>Set aside time at faculty meetings for teachers to share ideas or information from in-service activities</td>
<td>33</td>
<td>59</td>
<td>8</td>
<td>100</td>
<td>1.75</td>
</tr>
</tbody>
</table>

Table 8 shows the result of the respondents on the ability of school principals promoting professional development in schools. 23(23%) of these respondents strongly agreed that their principals ensure that in-service activities attended by staff are consistent with the school’s goals, 77(77%) agreed while none disagreed. This shows mean of 1.77 and standard deviation of 0.423. Also, 30(30%) of the respondents strongly agreed that their principals actively support the use of skills acquired during the training in classroom teaching, 61(61%) agreed, 9(9%) disagreed and none strongly disagreed. This shows a mean of 1.79 and standard deviation of 0.591. In addition, 38(38%) of these respondents strongly agreed that their principals ensure participation of all staff in important in-service activities, 60(60%) agreed, 2(2%) disagreed and none strongly disagreed. This reveals mean and standard deviation scores of 1.64 and 0.523 respectively. Furthermore, 39(39%) of these respondents strongly agreed that their principals lead or attend teachers in-service activities concerned with instruction, 61(61%) agreed and none disagreed. This shows mean and standard deviation scores of 1.61 and 0.490 respectively. Finally, 33(33%) of these respondents strongly agreed that their principals set aside time at faculty meetings for teachers to share ideas and information from in-service activities, 59(59%) agreed, 8(8%) disagreed and none strongly disagreed. It shows mean of 1.75 and standard deviation of 0.592.

In conclusion, the result of Table 8 above shows that majority of the respondents agreed that their principals promote professional development as a measure for improving teaching and instruction.

Table 9 Teaching Improvement (Provide incentives for learning)
Table 9 above shows the result of the respondents on principals’ ability to provide incentive for learning. 57(57%) of these respondents strongly agreed that their principals recognize students who do superior academic work with formal reward, 37(37%) agreed, 4(4%) disagreed and 2(2%) strongly disagreed. It shows a mean of 1.51 and standard deviation of 0.674. Furthermore, 56(56%) of the respondents strongly agreed that their school principals recognize superior students achievement by seeing students in their offices with their works, 37(37%) agreed, 7(7%) disagreed and none strongly disagreed. It reveals mean of 1.51 and standard deviation of 0.628. Similarly, 46(46%) of the respondents strongly agreed that their principals contact parents to communicate improvement in their students’ performance. 50(50) agreed, 4(4%) disagreed while none strongly disagreed on this item. This gives mean of 1.58 and standard deviation scores of 0.572. Finally, 39(39%) of the respondents strongly agreed that their principals support teachers actively in their recognition and reward of students’ accomplishment, 54(54%) agreed, 7(7%) disagreed and none strongly disagreed on this item. This shows mean and standard deviation scores of 1.68 and 0.601 respectively.

In summary, majority of these respondents agreed that their principals provide incentives for learning as a way of improving instruction in primary schools.

### 4.3. Relationships between Principals’ Instructional Leadership Practices & School Improvement

To answer research question 2, Pearson correlation coefficient was used to identify the relationship between principals' instructional leadership functions and school improvement. The Table 10 shows the statistical details:

<table>
<thead>
<tr>
<th>Item</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Total</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recognize students who do superior academic work with formal rewards such as the honor roll or mention in the principal's newsletter. Recognize superior student achievement or improvement by seeing students in the office with their work.</td>
<td>57</td>
<td>37</td>
<td>4</td>
<td>100</td>
<td>1.51</td>
<td>0.674</td>
</tr>
<tr>
<td>Contact parents to communicate improved or exemplary student performance or contributions Support teachers actively in their recognition and/or reward of student contributions to and accomplishments in class</td>
<td>55</td>
<td>37</td>
<td>7</td>
<td>100</td>
<td>1.51</td>
<td>0.628</td>
</tr>
</tbody>
</table>

Table 10 Correlation between principal instructional leadership and school improvement
## The relationship between principals' instructional leadership functions and school improvement

The relationship between principals' instructional leadership functions and school improvement was investigated using Pearson product-moment correlation coefficient. Preliminary analyses are performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity. Guilford’s Rule of Thumb was used to determine the strength of relationships in this test. Guilford (1973) recommended the following: $r < 0.20$ = negligible relationship, $0.20 – 0.40$ = low relationship, $0.41 – 0.71$ = moderate relationship, $0.71 – 0.90$ = high relationship and $r > 0.90$ = very high relationship.

Firstly the relationship of the overall principals' instructional leadership functions and the overall school improvement was investigated. The result is shown in Table 4 above. There was a high positive relationship between the two variables, $r = 0.841$, $n=100$, $p<0.001$. Since $\text{sig-t} < \alpha (0.0001 < 0.01)$, $H_0$ is rejected as there is a significant relationship between the principals' instructional leadership functions and school improvement among public primary school at 0.01 level of significance.

### 5. DISCUSSION

This study examined the seven principals’ instructional leadership functions that positively influences on school improvement. This is in line with a previous study by Finley (2014), on school leaders’ instructional leadership roles.

Besides, the role of a principal’s instructional leadership is clearly pointed out in this study from the viewpoint of teachers. Teachers highly regard their principals to use students’ performance data when developing academic school goals in terms of framing and communicating the goals. This is in line with the previous study by Finley (2014) saying that...
observation is imperative for school leaders to communicate and develop a clear vision on instructional accomplishment and ongoing professional development in the pursuit of enhancing teaching and learning.

Moreover, teachers perceived that roles of instructional leadership of principal in evaluating and supervising instructions is well seen in primary public schools when principals conduct observation on regular basis which is unscheduled, for 5 minutes, without feedback. This is in accordance with observation by Finley (2014) on instructional leadership studies include related to implicit effects of principals and teachers instructional forums and behaviours such as consequences of observing students’ progress in the classroom.

Also, the role of instructional leadership of principals as perceived by teachers in this study, describes the function of monitoring of students’ academic achievement in newsletters. This allows teachers and students alike to be well informed to take necessary actions in terms of students’ academic achievement. Heck and Hallinger (2014) supports this findings in their recent study stating that instructional leaderships gives an impact on student learning and their results also show that school principals boost student outcome in their school. This is also in line with the result of a study by Supriadi and Yusof (2015) that instructional leadership can influence students achievement as academic and intellectual elements are key to the school organizational environment.

Finally, findings also indicate that teachers perceive school leaders to use instructional leadership functions and possess positive relationship with school achievement in three main domains which are; provide incentives for teachers, promote professional development, and provide incentives for learning. Quinn (2002) identifies that instructional leadership domains correlated highly with its practice too. Heck and Halinger (2014) highlighted that instructional leadership in school can contribute to boost teachers’ success and school improvement at large. This shows that instructional leadership functions correlate positively with school achievement. According to Quinn (2002), there are many roles of instructional leadership such as providing resources and supply for teaching and learning as well as upholding effective and attractive learning for student improvement and achievement. In line with Quinn (2002) study, findings of this research indicate that school leaders need to build good rapport with their staff and provide opportunity for teachers’ participation in professional development. This concludes that principal’s instructional leadership practices have a positive effect on teachers and students that contribute to school improvement in many ways.

6. CONCLUSION & IMPLICATION

The results of this study indicate that there was positive relationship between principals’ instructional leadership and school improvement. However, the findings of this research provide improved supervision to Ministry of Education to encourage principals to implement instructional leadership practice in school to increase school’s improvement. According to Ministry of Education, all schools regardless of locations and performance will provide effective principal and in service training to enhance instructional leadership practices in school. Hence, this research highlights that school leaders need to focus their energy on instructional
leadership practices. As part of that, principals need to implement activities that can foster school achievement. This study provides principals with few guides for implementing instructional leadership style. Principals are encouraged to collaborate with teachers, students and community to develop collective goal. Also there is a need of training for principals, which help them to improve and increase their instructional leadership practices. This might be an effective approach to encourage principal’s commitment towards the school improvement.

Moreover, this study has proven that, practicing the seven major elements in instructional leadership will provide a good foundation to focus on school achievement. It provides a good guidance for the principal, teachers and MOE to identify the gaps to implement instructional leadership practice in schools. This knowledge can further assist the Ministry of Education, principals and teachers to plan and organise leadership programme to create efficient instructional leaders.

Finally, this research was carried out with the aim of helping the teachers to understand better about instructional leadership practices. This study can help teachers to understand and guide them to perceive instructional leadership practices to create effective learning community for the school improvement. Besides, it gives clear insights of their role to support school leaders to practice instructional leadership. The school leaders or ministry will not achieve their goal if teachers themselves are not willing to perceive instructional leadership in their school. As consequences the school leaders will be ineffective and inefficient leaders without a good teamwork from teachers.

7. REFERENCES


Broadening Magistrate’ Roles in Drug Abuse Offence
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Abstract: President Joko Widodo declared in December 2014, Indonesia is in drugs emergency situation. Narcotic National Board reported, until end of 2016, there was five million drug abuser in Indonesia, 4% among others were suspected for drug cases, and about 50% of ±180,000 prisoners contributed by drug cases. All prisons are overcrowded nowadays.

The number of the first time user is rapidly increasing every year while the number of the drug abuser who is voluntary accessing medical and social rehabilitation facilities are meaningless, whereas Government has established a Compulsory Registration for Drug User. On the other hand, even though there was rehabilitation verdict for drug abuser who is in an indictment, the process is too long, and finally, the judge decided to prison sentencing for them. The effort to overcome drugs problem is committed incessantly to reduce its supply, demand and harm.

Since the 1990s, international community developed a new model approach through a pretrial process based on therapeutic jurisprudence (TJ), restorative justice and diversion (RJ and D) to discharge various conflict of law including drug abuse. The approach is in line with the expansion of social science, behavioural science and mental health law with the primary assumption that everything comes from the judge: actions, words, and commands can be very constructive to influence someone who is indictable, whether physically and psychologically.

This article is a qualitative study that rests on documentary research and intended to criticise possibility implementation of magistrate’s roles in order to handle drug abuse offence via pretrial court, based on therapeutic jurisprudence, restorative justice and diversion. There are three research questions: (1) what are the relation between drug abuse, TJ, RJ and D? (2) What roles of magistrate needed to handle drug abuse? (3) What is future policy formulation on magistrate’ roles for drug abuse, TJ, RJ and D?

Keywords: Magistrate, Therapeutic Jurisprudence, Drug Abuse.

A. Introduction

This article is aimed to criticize the roles of Magistrate in order to handle drug abuse offences at pre-adjudication process in Indonesia. Therefore, this article should explain the scope of magistrate roles, Therapeutic Jurisprudence (TJ), Restorative Justice and Diversion (RJ and D) and the utilization of the idea in handling drug abuse offences through the answers of three research questions, as follows: 1) what are the relation between drug abuse, TJ, RJ and D? (2) What roles of magistrate needed to handle drug abuse? (3) What is future policy formulation on magistrate’ roles for drug abuse, TJ, RJ and D?

B. Method
Discussion in this article is based on a qualitative study that rests on documentary research and presented in a descriptive analysis concerning to the three research questions above. Collective numbers of laws, policies, studies and secondary relevant documents and literatures were reviewed to answer the research problems.

C. Discussion

_Therapeutic jurisprudence_ is a school of thought in legal philosophy that was developed at the same time with general social science as well as behavioral science. It is based on the assumption that everything that comes from the judge either through actions in various ways and forms, words and or orders ordered by judges in the courtroom can be very influencing to a person who is facing examination both psychologically and physically. Grounded on _therapeutic jurisprudence_ then the legal function that contains _therapeutic_ are developed through judges however without violating juridical norm and value commonly respected by judge as stated by Anleu and Mack that:

“A therapeutic jurisprudence approach can also involve the courts or judicial officers working more closely with human services personnel to address various social and personal problems, including drug-abuse and addiction, homelessness, unemployment and lack of works – related and parenting skills. This demonstrates the legal system’s interest in and engagement with the antecedent causes of crime or behaviour that resulted in a person’s court appearance”.

In short, _therapeutic jurisprudence_ is not meant for law to take over the task of public health promotion and public welfare, but the law should not bring anything worse to those involved in legal matters.

_Restorative justice_ is an approach in achieving justice through a series of processes based on certain philosophies, basic principles and values. Braithwaite has formulated _restorative justice_ values in three categories according to the three main objectives of restorative justice as in “United Nations Basic Principle on the use of Restorative Justice programs in Criminal Matter” namely restorative process, restorative outcome and restorative program. Values of RJ concerning restorative process are: non-domination, empowerment, honoring legally specific upper limits on sanction, respectful listening, equal concern for all stakeholders, respect for fundamental human rights. The value of restorative outcome among others:

252 Susan Goldberg, (2005); _Judging for the 21st Century: A Problem-Solving Approach_, National Judicial Institute, 2005: “Therapeutic Jurisprudence asks all judges to recognize that they can be important agent of change, and to acknowledge that their words, actions and demeanour will in variably have an impact on the people who come before them in the courtroom”.


255 Winick, Bruce J. and Wexler, David B; _Judging in a Therapeutic Key_, page 1113.

restoring of human dignity, restoring of property loss, restoring of safety/injury, restoring of damages of human relationship, restoring of communities, restoring of the environment, emotional restoring, restoring of freedom, restoring of compassion or caring, restoring of peace, restoring of sense of duty of a citizen, restoring of social support to develop human capabilities to the fullest, prevention of future injustice. Whereas values concerning restorative program are: remorse over injustice, apology, censure of the act, forgiveness of the person, mercy.  

As a process restorative justice requires all stakeholders involved in solving a problem to having the opportunity to discuss the impact of the problem on a person or group of people in society. In general, victim offender mediation is a mechanism in restorative justice that is relied upon in ensuring the fulfillment of values in the restorative process. But nowadays circle approach is more commonly used because of its wider scope which includes family and or friends of victims and perpetrators and representatives of the general community as well as community representatives affected by the perpetrators’ actions.

The above description shows that it is necessary to prioritize the values in the restorative process when implementing victim offender mediation, conferencing or circle. However, when the process takes place it can shrink to the existence of an agreement, it is important to consider what things are important to be restored, as in restorative outcomes. Furthermore, the agreement being a restorative outcome should be able to meet the values of restorative justice that can then be implemented through a diversion program.

Braithwaite tried to show commonalities in methodology between restorative justice and therapeutic jurisprudence, that both has similartiy in the perspective and scope of understanding in giving a genuine and empathetic attention to save as many people as possible of those who involved in legal conflict. Therapeutic jurisprudence seeks to pay attention to the demands of loss of property, pain (suffering), emotions and good relationships with others as the main grip in the common life as a human being, while restorative justice focuses more concretely on processes that prioritize values and principles so that it can guarantee the recovery of victims from pain, loss of property, emotions and good relations with others through encouragement to the perpetrator to be responsible.

Besides acknowledging the common area of similarity as proposed by Braithwaite, Daly and Marchetti; they added that the extraordinary development of therapeutic jurisprudence and restorative justice was inseparable from the social movement that occurred in the 1970s demanding a more humane and effective response to victims and perpetrators, and requests that judicial practice be more varied through informal justice by lay actors and community organisations. The social movement gained tremendous support, especially after in the 1990s when it was identified that the conventional Criminal Justice System (CJS) failed to fulfill its


258 Ibid., page 246

259 Ibid., page 244: “The biggest methodological similarity between Therapeutic Jurisprudence and Restorative Justice is emphaty for human survivors of legal conflicts; this demonstrates a holistic grasp of the human consequences – in loss, pain, emotion and relationship – of the legal encounter. While Therapeutic Jurisprudence is mainly a lens for focusing on these concerns, Restorative Justice involves more concrete commitments to just process and values. Distinctively holictic approaches to thinking restoratively about criminal responsibility and shame are used to illustrate”.
mandate. These conditions encourage social movement activists increasingly vociferous demands to be made a judiciary through a different way (doing justice in different ways).

While acknowledging a common concern, Kathleen Daly and Elena Marchetti also pointed out the fundamental differences between restorative justice and therapeutic jurisprudence as well as indigenous justice as following:

“... there are key differences. Restorative justice aims (at least ideally) to address the needs of both offenders and victims, whereas Indigenous justice and therapeutic jurisprudence focus largely (although not exclusively) on offenders’ needs. The levers of change also differ: for restorative justice, it is in the relationship of victims, offenders, and communities; for Indigenous justice, it is the relations between Indigenous people and “white justice”; and for therapeutic jurisprudence, it is the relationship between legal actors, especially judicial officers, and offenders.”

Having gone through developments in recent decades, the stance given by common law countries like Australia to crime is concealed in two directions, namely “innovative” and “repetitive”. The innovative requires that the judicial system be implemented differently and therefore the form of the old Criminal Justice System needs to be changed. While the repetitive desires that existing forms and judicial systems run more efficiently and often directed to be more punitive. Within that framework, Daly and Marchetti stated.

Discussion about therapeutic jurisprudence in relation to the handling of drug abuse is important and interesting because therapeutic jurisprudence provides a justification for judges and judiciary institutions to be involved early and intensively in the rehabilitation process through the establishment of therapy and rehabilitation programs; progressive monitoring of the fulfillment of therapy and rehabilitation programs against abusers and addicts either through the reports of health workers or (social worker) or through the involvement of drug addicts or drug abusers in the restorative process; and the court appearance as an indispensable part of rehabilitation program. Along with the development of CJS and the influence of therapeutic jurisprudence.

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261 Ibid., page 4.


263 Ibid.
jurisprudence and restorative justice, the introduction of special justice for drug abusers in Australia is called a drug court. 264

In the USA known in general with problem solving court, consists of drug treatment court or mental health court. In the USA, the drug treatment court was first established in Dade County, Miami in 1989.265 Although using different terms, the drug court and drug treatment court have the same substance, operational base and principle. The relationship between drug court and therapeutic jurisprudence is described as follows:

There is a clear symbiotic relationship between problem-solving courts [specifically drug courts] and therapeutic jurisprudence. Simply put, problem solving courts can serve as laboratories for therapeutic jurisprudence, insofar as therapeutic jurisprudence is especially interested in which legal arrangements lead to successful therapeutic outcomes and why. 266

The presence of the drug treatment court is an alternative to the traditional criminal court which provides an innovative way to conduct legal proceedings against some drug offenders. The origins and growth / development of the drug justice system in the United States can be explained as an unexpected result by the USA for failing in a war on drugs or known as war on drugs.267 In an article titled Adult Treatment Courts: A Review, Jansen, Parsons and Mosher reviewed the controversies that accompanied the presence of drug treatment courts in the USA. It is affirmed that because of the drug treatment court is different from the criminal court in general, so its presence provokes controversy. 268

As stated earlier, the presence of a drug court or drug treatment court and other special courts is based on a philosophy that can be referred to therapeutic jurisprudence. The idea arises from the proposition that courts have a very meaningful power to make social change, through active day-to-day intervention of intervention parties in an unlimited number of non-traditional ways.269 The new movement towards therapeutic jurisprudence in many ways has in common with movements in the juvenile court that developed in the late 1800s to early 1900s. Under the model, traditional legal procedures are modified and even eliminated with the goal of achieving environmentally-based treatment.270

267 Ibid., page 554.
268 Ibid.
Objections based on legal understanding of the therapeutic jurisprudence movement were once voiced vigorously by Judge Denver Hoffman who feared an uncontrollable danger when the government decided to put amateur psychiatrists to do something better than to apply the law. Judge Denver Hoffman stated unequivocally, "I can not imagine a more dangerous branch (of government) than an unrestrained judiciary full of amateur psychiatrists posed to do” good "rather than apply the law". 271 In addition to Denver Hoffman, more general criticism has been noted by Fischer that the judge of the drug court uses an extraordinary level of discretion, which may have never existed before, and is usually done in the absence of guidance and applied to unofficial or informal environments. 272

In the traditional judicial system in common law countries, the judiciary is generally conducted adversarially, 273 with the primary aim of establishing and maintaining legal justice. The judiciary is conducted to examine if juridical elements in the provisions of the Act by alleged acts, then declare with certainty the mistake of the perpetrator. The court plays a very small role in supervising the perpetrators, either before the case is terminated, after the perpetrator is found guilty and punished by law, or when the perpetrator is serving a correctional punishment in the correctional institution. To achieve that goal there are individual representatives in the criminal justice system. The treatment and rehabilitation programs that are available and are part of the correctional institution usually last very long and extensive, following the length of the sentence decided to be executed. And no less important is that if there is a relapse or recidive, whether a new crime or a violation of the terms set in probation, then generally the court will aggravate the penalty to prevent the occurrence of repetition or a new offense. 274

Drug court prioritizes teamwork in realizing non-adversarial justice objectives with the aim of restoring the perpetrators of criminal acts of drug abuse to be productive again, to restore the perpetrators of the crime of drug abuse into society and to avoid the perpetrators of stigmatization and discrimination as criminals. In such cases, the courts play a very important, intensive and structured role, monitoring the progress and advancement of the treatment and rehabilitation programs of each program participant or client. Gradual sanctions can be imposed on program participants who do not comply with the rehabilitation program established by the drug court. The most unique characteristic of drug court is the intensive collaboration among all team members under the leadership of a commissioner's judge. Cooperation and team collaboration started from the creation of the therapy plan, followed by the implementation and monitoring of the programs through the process of the drug court. Important things to be

271 Ibid.


273 Briyan A. Garner, ed., Black’s Law Dictionary-Eight Editions, (Thomson & West, 1999), hlm 58, “adversarial system: A procedural system, such as the Anglo-American Legal System, involving active and unhindered parties contesting with each other to put forth a case before an independent decision-making. Also termed, adversary procedure; in criminal cases: accusatorial system, accusatorial procedures”. Hal ini berbeda dengan inquisitorial system dimana: “the term adversary system sometimes characterizes an entire legal process, and sometimes it refers only to criminal procedure. In the later instance, it is often used interchangeably with an old expression of continental European Origin, “accusatorial procedures” and is juxtaposed to the “inquisitorial or non-adversary” process. There is no precise understanding, however, of the institution and arrangement denoted by these expressions”.

decided either about the initial assessment of the level of addiction, criteria and requirements that must be met by the program participants, criteria and requirements regarding termination of the program or termination of a person from the program due to failure and subsequently sent to the traditional judicial process, carried out by the team of drug court under the leadership of the commissioner's judge.275

Nevertheless, the larger controversy surrounding the drug court is the debate about better sanctions than treatment. Stakeholders such as public prosecutors, police, prosecuting officers believe that community-based treatment, social workers, bureaucrats in the drug court and some members of the public in general appear to be too soft against someone charged with a drug-related offense. The position contrasts with the perception of drug users, who argue that the drug court is the most productive alternative to sanctions from the traditional justice system because illegal drug use per se is a trivial criminal offense.276

Another controversy related to the drug court is the debate about better sanctions than treatment. Stakeholders such as public prosecutors, police, prosecuting officers believe that community-based treatment, social workers, bureaucrats in the drug court and some members of the public in general appear to be too soft against someone charged with a drug-related offense. The position contrasts with the perception of drug users, who argue that the drug court is the most productive alternative to sanctions from the traditional justice system because illegal drug use per se is a trivial criminal offense.276

Another controversy related to the drug court is about the element of coercion. According to Spinak, many observers rejected the drug court stating that perpetrators are often forced to follow the program. This argument has also been made against the diversion in the juvenile justice system in which the offender is usually forced by staff at the drug court, prosecutor or judge to be willing to accept the alternatives provided. One thing that is generally offered as a lure in the drug court is to reduce or eliminate the punishment if it successfully meets the drug court program.277

Spinak added that it is still related to the element of coercion, it turns out that the perpetrator was given a choice, whether the case was forwarded to the traditional CJP in the court or the drug court. In such a case the free abuser chooses according to his interests and the best he feels. About coercion, parties opposing the drug treatment court argue that the rights of the perpetrators of the due process are found to be compromised in the drug court whereas due process right is necessary to protect the perpetrators against state power. Even so, the client or the program participants often give up and agree to lose some or all of the protection rights in the due process right of the state, only in order to participate in the drug treatment court.278

Another fact noted by Richard Boldt that for most perpetrators the decision to participate in the drug treatment process can mean that the state effectively does not perform the presumption of innocence principle to provide protection against the right to a fair hearing in a guaranteed court in the United States Constitution.279 In other words, it implicitly means that by following the drug treatment court program the abuser has lost the right to be considered innocent (presumption of innocence).

275 Ibid. According to Maryland Court, Clerk’s Office, Circuit Court for Cecil County, MD: “Perhaps the most unique and important characteristics of drug court programs is the level of cooperative relationships formed among the drug court team members. Collaboration begins during the early planning stage and continues throughout the operations of drug court. All major decision points, from screening criteria and eligibility requirements to termination and completion of the program, result from collaborative agreements among drug court team members. The court, through the designated drug court judge, provides the overall leadership of the team and represents the court authority to the drug court participants.”


In response to criticism of the drug treatment court in the USA, Boldt stated that there is the opinion that drug abusers can avoid the possibility of imprisonment, avoid the possibility of being removed from their home and / or community, receive the necessary treatment, and get a reduction of the burden of responsibility if they successfully fulfill the treatment program. From this perspective, the benefits gained by participating in the drug treatment court are far greater than (in comparison with) losing due process rights. 280

Another controversy surrounding the drug court is about involving drug abusers in involuntary treatment or invoke involuntary substance abuse treatment with other substances. Parties who support this view argue that the use of involuntary substances for treatment is often successful and thus should be done by the state as far as possible. Experts like Mosher and Akins argue that ethical and legal issues in forcing a person to follow substance treatments are contrary to their wishes, and this dilemma is certainly mixed with issues surrounding coercion and lack of protection against due process right. 281 Drug dependence as a basis for treatment through drug treatment court is also controversial. The growing movement in the USA states, substance abuse is a biological based disease and thus needs only to be treated in some way according to traditional medical problems. 282

The National Institutes of Substance Abuse in the USA has explained that addiction is a brain disease but Stanton Peele 283 claims that the popularity of this disease is related to some types, but scientific support for various types of diseases is very weak. 284 Critics of the other drug treatment court also came from Nolan who argues that in general the advocates of problem-solving courts and drug courts overly believe in the therapeutic jurisprudence rhetoric that ignores proportionality as a fundamental principle in law. The clients of the drug court are asked to follow harsh rules of conduct, sometimes including employment, following the development of public education in the classroom (or equivalent to a high school), drug testing, individual counseling, group counseling, trial fees, pay fees for the drug court, etc., including following a narcotic anonymous meeting 285 that is a community with acute problems of drug abuse that meet regularly to help each other and support each other in order to keep recovering and no longer using drugs. 286

Nolan asserts that the proponents of problem-solving courts through their chosen treatment, have replaced honesty and fairness which are the basic values highly respected in the CJS. Drug treatment courts are also criticized for the possibility of ordering treatment in a manner contrary to acceptable clinical standards. It was also discussed that some drug court programs such as narcotic anonymous, potentially violating religious freedom by forcing participants to follow

280 Ibid.
the twelve steps of the program provided. Apart from the above debates, USA, Australia and New Zealand have operated the drug court with considerable results.

Simply stated, the drug court is a preliminary trial (pre-trial) which is an integral part of the existing CJS (traditional court). Through the drug court then the judicial process against a person abusers or drug addicts postponed or suspended for treatment, treatment and rehabilitation. As an indispensable part of the traditional CJS and tribunals, the drug court was established to allow judges to engage early on in rehabilitation programs for drug abusers and addicts. The experience of the countries that have established and operated the drug court shows that through the drug court the drug abuse can be reduced (reduce drug abuse), reduce drug related crime, save money, can save more young people from addiction to children abuse, reintegrate abusers into families and communities and restore lives of people and people (restore lives).

On the other hand, a report published by the Drug Policy Alliance notes three major deficiencies of the drug court: first, the drug court has shown no cost savings, reduced detention or imprisonment and did not improve public order in society. In fact, the drug court program only selects certain people with petty drug law violations that are expected to perform the program well. Thus, the actual drug court is not oriented to divert someone from the length of the imprisonment period, so many drug court program participants end up with a longer period of imprisonment than those who have been following the traditional CJS process since the beginning. Because the drug court only targets minor drug crimes, the positive results obtained by program participants can not significantly improve public order in society. Treatment and rehabilitation carried out in voluntary or through a probation-supervised parole program bring more benefits than those generated through the drug court.

Secondly, the drug court turned out to cause many people to be poorer as they tried to meet the program requirements. Despite some success notes from program participants but the drug court also left many poor and unable to rise from adversity when compared to those who received treatment, care and rehabilitation services outside of CJS. Third, the drug court turns out to be more oriented towards punishment, rather than reducing punishment for addicts. Indeed, the drug court has adopted a model of treatment for addiction, but still punishes those who experience recurrence with incarceration even on the orders of a judge, a person may be excluded from the program if not stop using the drug for a set period. This is certainly different from a focused health program, which prioritizes public health principles and is implemented without penalties. Health programs focused on public health approaches are more effective, cost-efficient and more oriented towards handling addiction problems due to drug abuse.

As an illustration is the Magistrate Early Referral Into Treatment (MERIT) program, in New South Wales (NSW) Australia which has had Drug Court Act Number 150 since 1998, and aims to: (a) to reduce the drug dependency of eligible persons and eligible convicted offenders, and (c) to reduce the need for drug dependent persons to resort to criminal activity to support

288 Drug Policy Alliance, Drug Court Are Not the Answer: Toward a Health-Centered Approach to Drug Use, March 2011, page 2-3. To download all the document, please also visit and see: https://www.drugpolicy.org/docUploads/Drug_Courts_Are_Not_the_Answer_Final2.pdf
289 Ibid: “Drug courts have not demonstrated cost savings, reduced incarceration, or improved public safety”.
290 Ibid: “Drug courts leave many people worse off for trying”.
291 Ibid: “Drug courts have made the criminal justice system more punitive toward addiction – not less.”
their drug dependencies”. NSW recognizes court diversion implemented by drug court through three schemes, namely: (a) MERIT, (b) Adult Drug Court and (c) Youth Drug Court. MERIT is a transfer of punishment by pre-trial process by magistrate through drug court. Those who can make initial referrals for drug court checks are voluntary clients or program participants, commissioners, police, solicitors, social worker, health worker and community at large. MERIT is a pre-plea program without (before any) admission or plea of guilty from the program participants. The magistrate in the drug court conducts a special pre-trial to examine the cases referred to through the MERIT process for persons over eighteen years of age. The MERIT program is based on consideration:

“Magistrates regard the MERIT program as an opportunity to assist defendants with a drug problem before a plea has been entered. Magistrates consider MERIT to be highly desirable because it allow the courts the ability to provide defendants with the opportunity to participate in treatment in the hope of breaking the drug crime cycle. Approaching the drug crime problem in this way is a benefit not only to the individual but also to the community as a whole. MERIT is a court-controlled program and MERIT caseworkers assist with the administration of justice”.  

MERIT process voluntarily so there is no limit on how many times a person can be included. The MERIT process through the drug court is conducted in four stages. The first stage, after the client is referred to the MERIT program, the judge commissioner conducts an eligibility assessment which may result in two possibilities: the client does not meet the criteria for the MERIT program and therefore the judge commissioner decides that the police can directly complete the file for submission to the court proceedings; while other possibilities is that if according to the commissioner judge the client meet the criteria hence decided that the legal process is postponed then he or she may ask MERIT team to conduct a more comprehensive and complete assessment if not previously done.

The second stage, the results of comprehensive assessment can issue two possibilities; firstly, the client is not eligible for the MERIT program so that it is immediately referred to the police to complete the file and be sent to court for processing according to court proceedings for the crime in general. However, the second possibility is that if the client is eligible to join the MERIT program, then the judicial commissioner may legalize the postponement of proceedings to the court and ask the client to begin treatment or rehabilitation within six weeks. The third stage is that after six weeks of treatment and rehabilitation, the client must attend the session at the drug court to listen to the progress report. The progress report is prepared by the MERIT team consisting of health worker, social worker, lawyer, attorney general, and police with and under the leadership of the magistrate. In the trial, if the progress report indicates that the client successfully runs the program properly, the commissioner's judge may suspend the legal

292 Government of Australia, Drug Court Act Number 150 part 1-preliminary, article 3.
293 Ulrich E. Thomas, Pretrial Diversion in Federal Court System, Westlaw, Federal Probation, Vol. 30, 2002, page 30: “Pretrial diversion is a voluntary program that provides an alternative to prosecution for an individual selected for placement in a program of supervision administered by a pretrial services or probation office”.
295 Ibid., page 14.
process and recommend six more months for the person concerned to complete the treatment and rehabilitation efforts through the MERIT program. 296

The fourth stage, after the three-month MERIT program (the first six weeks and the second six weeks) the client is required to attend a court hearing to hear the final report. As stated earlier, the MERIT program is voluntary so that every time the client can resign and the MERIT team can inform the commissioner judge. Similarly, if the client fails to meet the requirements set for it in the MERIT program then magistrate is notified and the client is removed from the program, then he/she follows the trial as a traditional court process. The criteria that must be met in order for a person to join the MERIT program are: (1) mature; (2) be eligible to be free with warranty or not to require warranty consideration; (3) voluntarily willing to participate in the MERIT program; (4) being a suspect user or in a state of drug dependence or known to have a history of drug dependence; (5) if the candidate is a defendant, he is not charged with violence, not being charged with sexual assault, not being charged with other serious crimes categorized as strictly indictment.

Drug abusers are referred by the local court to the NSW Drug Court, and are acceptable if they meet all the requirements set out namely (a) participate in the detoxification process; (b) can be rehabilitated (have potential for rehabilitation); and (c) are not charged with committing a crime of sexual violence or crime or a criminal offense that must be directly prosecuted in court (not having been charged with violent or sexual offenses or with a wholly indictable drug offence).

The drug court team develops an individual-based program, conducted regularly for twelve months or more by each participant, consisting of drug treatment and rehabilitation sessions, counseling sessions, education and job training, drug screening and reporting back to the Court. A case manager is assigned to monitor the progress of each participant while judges and other teams monitor the progress of participants in the program. The results are used as a basis for determining if a participant can be upgraded to the next stage or impose sanctions, if necessary stop the program being implemented.

Progress during the program is considered at the end of the program when the offender receives the final decision of the drug court can be used to consider the actual sentence (original sentence). 297 This mechanism is also called post-sentencing which is the process after the perpetrator was sentenced by local court then granted with diversion facilities as a transfer of imprisonment. Through this mechanism the restorative justice program such as forum sentencing, circle sentencing, and community conferencing can be implemented as part of the diversion program.

Besides the above five mechanisms until the completion of this study, NSW is the only state that has Drug Treatment Correctional Center as a pre-release. The main program of the Compulsory Drug Treatment Correctional Center (CDTCC) is the treatment of inmates with very serious drug dependence which is currently serving a sentence at the Correctional

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296 Ibid. See also; Rohan Lulham, NSW Bureau of Crime Statistics and Research, Crime and Justice Bulletin, Number 313, July 2009: “the Magistrates Early referral into treatment Program Impact of program participation on re-offending by defendants with a drug use problem”.

Institution, namely: *treatment and rehabilitation for offenders with long term illicit drug dependency and an associated life of crime and constant imprisonment*”. 298

The National Narcotic Body (BNN) Research and Health Research Center of the University of Indonesia stated that in Indonesia during year 2008 the national prevalence rate of drug abusers was 1.99% of Indonesia's population, or about 3.1-3.6 million people, consisting of 27% of those who try to use, 45% of regular users, 27% of non-injection addicts, and 2% of injecting addicts (P4GN BNN, 2012). The national survey of prevalence of drug abuse in 2014 (BNN, 2014), estimated the number of drug abusers as much as 3.8 - 4.1 million people or about 2.10% to 2.25% of the total population of Indonesia. Data on the number of drug abusers is supported by an increase in the number of main types of drug confiscation namely is marijuana, shabu, ecstasy and heroin and the number of drug abusers who become suspects. In 2006, 17,326 suspects were detected, increasing to 26,461 in 2010299 and 363,737 in 2015300.

Trend abusers who try to use also continue to increase in the last ten years. Figures for abuse in the provinces of DKI Jakarta, West Java, East Java, North Sumatra, Riau Islands, Riau, West Kalimantan, Bali, South Sulawesi and Papua totaled 481,466 in 2008, increased to 751,786 in 2011 and 891,490 in 2014 (BNN, 2015, Appendix II, pg. 103-136).

The high number of narcotics cases in the Republic of Indonesia’s Supreme Court (MARI) caused the prisons to be over-crowded. The number of inmates is dominated by drug prisoners, either as abusers, distributors, dealers or producers. According to the Annual Report of the Directorate General of Corrections in 2014, most of prisons are filled by narcotic prisoners of 56,326 persons or 92.39% of 60,961 inmates of special criminal acts. If residents and occupancy capacity are compared, in 2014 prisons are lack capacity for 37,344 inmates in 2010, rising to 44,717 in 2011, 47,392 in 2012, 52,787 in 2013 and 53,841 in 2014 (Annual Report DIRJEN PAS, 2014, p.18). Such conditions lead to frequent unrest, torture, rebellion, fights, drug smuggling and escape. Presidential Instruction No. 12/2011 on the eradication of drug abuse and illicit trafficking (P4GN) was issued in year 2011 with three national policies which are firstly to make 97.2% of Indonesia's population immune against drug abuse and illicit trafficking; to completely erradicate drug syndicate network; and to provide gradual medical and social rehabilitation services to 2.8% of drug abusers.301

Despite the progress obtained, the implementation of the Narcotics Act has not shown encouraging results. Illicit trafficking narcotics increasingly widespread and massive. Drug abuse is increasingly prevalent in all walks of life. The perpetrators of drug crime continue to develop new substances and renew the modus operandi of the crime with the help of transportation technology and informatics. The crime of illicit drug trafficking with economic benefits as the primary motive is controlled by the transnational organized crime mafia. It is now necessary to suppress the number of abusers and junkies who were imprisoned in an earlier process towards rehabilitation program through the role of magistrate, therapeutic jurisprudence, restorative justice and diversion worthy of consideration.


300 Visit and see the BNN Data Base, BNN, http://www.bnn.go.id dan Dirnarkoba-POLRI.

The Magistrate 302 is the title for judges who is granted with assignment and role (authority) to carry out a preliminary examination of a crime before the defendant's act is prosecuted before the court. The preliminary investigation does not verify the alleged wrongdoing of the offender, but only in relation to the validity of the investigation and the coercion or forced attempts by the investigator and / or other authorities who has the authority based on the law.

Judge commissioners or rechters-commissaris actually been known and practiced in criminal procedural law in Indonesia, especially for the European class. It is stated that the active role of the judge at every level of examination in the judicial process should be realized from his authority in two respects, namely to play a role in the timing of preliminary examination and supervision of the court decision. The exercise of the authority of the judges of the commissioners is intended that in the CJS the judge is authorized from pre-adjudication to post-adjudication or the exercise of the authority of judges from upstream to downstream, including the execution of post-adjudication by oversight or supervision of the convicted or Supervisory and Observation Supervisory Board as set forth in the Criminal Procedure Code (KUHAP), Chapter XX, article 277-283.

After independence, the CJS in the preliminary investigation introduced in the Section 77 as a pre-trial law that is the jurisdiction of the district courts to examine and decide whether or not an arrest or detention of a suspect or his or her family or other person of the suspect's authority is appropriate; (b) whether or not the termination of the investigation or termination of the prosecution upon request for the upholding of law and justice; and (c) the request for compensation or rehabilitation by the suspect or his or her family or any other party for any proxy whose case is not brought to trial.

The authority of the pre-trial judges referred to above has been extended by the Supreme Court of the Constitution of the Republic of Indonesia through Decision of the Constitutional Court Number: 21 / PUU-XII / 2014, dated 16-03-2015 so that besides all that has been stated in the provisions of KUHAP article 77 above, the pretrial authority includes and or includes but is not limited to the validity of the search, the validity of the seizure, the validity of the suspect's determination in which the validity of the suspect's determination should be read as having been found at least two evidences and the suspect has been examined or heard by the investigator.

The draft of Government of Republic of Indonesia Criminal Code of January 6, 2014, 304 has introduced and rearranged about the commissioner judges however by the name of preliminary examiner judges, and is authorized to assess the course of investigation and prosecution, as well as other authorities such as granting permission to seizure, searches, intercepts, and or granting a request for an extension of detention. Even though the provisions of a preliminary examiner judge may be found for example in Article 42 paragraph (1) subparagraph b and Article 60 but the complete arrangement in the draft of the Criminal Procedure Code is placed in Chapter IX-The Pre-Examining Judge, consisting of three parts and twelve articles, namely Articles 111 to 122. The scope of its authority includes, among other things, the appropriateness of a case for prosecution to the court, which may be filed by the public prosecutor.

302 Briyan A. Garner, Black’s, page 383; Magistrate’s court: ... Also termed (in England) court of petty sessions; court of summary jurisdiction, pretrial program atau pretrial intervention”.


304 Ibid.
If carefully observed, the provisions concerning the preliminary examining judges in the KUHAP Bill principally relate to the control over the authority to carry out forced attempts in investigation power and prosecutorial power, originally in the Criminal Procedure Code being in the hands of investigators and prosecutors. Within the framework of the control of the investigation power and the prosecutorial power, in the provision of Article 111 Paragraph (1) letter i, the preliminary examiner judge is also given the authority to determine or decide if a case shall be or feasible to be prosecuted.

D. Closing Statements and Conclusions

Therapeutic jurisprudence provides a justification that the crime of drug abuse can be processed prematurely through restorative justice and diversion towards rehabilitation by magistrate. In order for early referral mechanisms to be utilized properly, in the pre-adjudication phase, magistrate is authorized to assess whether or not a criminal act of drug abuse is brought to justice. In the future, the provisions of the bill on Criminal Procedure Code need to be expanded and reinforced in order to include and cover examination and assessment of whether or not a victim of abuse, abuser or addict get diversionary facilities to undergo treatment, treatment and rehabilitation therapy as a restorative outcome and restorative program. In relation to the implementation of the diversion of drug abusers based on the principle and value of restorative justice in the pre-adjudication stage it is also necessary to consider and affirm the duties and authorities of the judge to determine whether or not a drug abuse case is passed to the level of investigation and prosecution in a preliminary examination.

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Abstract: The Court of Justice is in charge of the justice administration for the people. Its primary goal is to have disputes settled with convenience, speediness and firmness. The way is by integrating mediation in the proceedings in court. This research is normative research, that conducted with the study of documentation. This study uses the legislation approach, which is to analyze the legislation on the settlement of civil disputes through mediation in The Court of Justice of Thailand, according to The Regulation of the Judicial Administration of the Commission of Mediation B.E. 2544. The research procedure begins with collecting legal materials, then analyzed by reviewing on the legal issues raised, until the author can find out the regulation of civil disputes settlement through mediation in the Courts of Justice of Thailand, as well as know the advantages and disadvantages of the regulation. According to the regulations in Thailand, the mediator is elected by the chairman of the court or chairman of the Panel of Judges, and the judge of case examiner can not be a mediator. The regulations clearly regulate the registration and supervision of the mediator, and do not require the lawyers in the mediation. Then, prior to the mediation process there was regulation requiring the parties to submit the resume of case and make a legal agreement to continue the mediation process and comply with the rules. On the other hand, one of disadvantages of the regulation is the stages of the procedure and the time of mediation have not been clearly regulated.

Keywords: Dispute Resolution, Mediation, Court, Indonesia and Thailand.

1. INTRODUCTION
1.1. Background

The legal system in each country is different, because it is influenced by history, culture, morality, religion and legal politics in every country. To study the legal system of a country, we must understand the history and legal culture of the nation. This is also true in studying the country of Thailand. In 1908, during King Rama V Thailand inaugurated The Criminal Code and at that time continued the drafting of other rules such as The Civil and Commercial Code, The Criminal The Procedure Code and The Civil Procedure Code completed during the reign of King Rama VII of Thailand. There was the development of the legal system in Thailand.

The highly complex societies’s life, ethnically, economically, socially, culturally and diversely different from each person, can cause disputes, disputes can occur between two parties individually, communally, even involving many parties and countries, from simple problems until the most crucial, the dispute is called a civil dispute.
In Indonesia, it is true that in terms of civil law cases, courts are assisting justice seekers and must strive to overcome all obstacles and barriers to a simple, quick and costly trial, but in practice the trial process takes a long time, expensive fees and procedures that are too formal, and often court decisions do not solve the problem, this condition makes the court does not give the justice for nation. Based on these problems, Arising an Alternative Dispute Resolution (ADR) form which includes consultation, negotiation, mediation, conciliation, legal opinion and arbitration, has been regulated by several countries in Asia, including in Thailand.

The integration of mediation in the proceeding courts is expected to be an effective instrument to overcome the custody problem, to strengthen and to maximize the judiciary’s function in the settlement of disputes in addition to adjudicative court proceedings, but needing strongly effort in implementation. Alternative Dispute Resolution (ADR) is the most important part of the legal system in Thailand, as mentioned in the International Affairs Division Office of the Judiciary website:

*The Court of Justice is in charge of the administration of justice for the people. It’s primary goal is to have disputes settled with convenience, speediness and fairness. In addition to having disputes settled by means of hearing and rendering judgment, mediation is a method to resolved disputes which is commonly adopted by court of many countries. Mediation is a dispute resolution mechanism that can enable a convenient, speedy and efficient settlement. In mediation, the disputes parties may achieve a mutually satisfactory settlement in which there is no loser or winner from the outcome. Both parties can emerge as the winner with a win-win solution that can preserve their long term relationship. The least, settlement of dispute by mediation also can lead to a more peaceful and harmony society, reduce the number of cases going through the trial process and provide a change for people participation in the dispute settlement process.*

Thailand has ratified the United Nations Convention (UN) in New York, USA 1958, then the Alternative Dispute Resolution (ADR) in Thailand is governed by the Arbitration Act B.E. 2545. The mediation has been regulated in The Civil Procedure Code since 1934 in Thailand, and confirmed by the Regulations of the Judicial Administration Commission on Mediation B.E. 2544 which regulates the mediation process at the courts.

Given the different provisions and influence of mediation in courts in each country, especially Thailand, the author wants to study and analyze its provisions, how the process, and what are the weaknesses and advantages of the provisions set in Thailand. Based on the description, the author is interested to develop a paper entitled "Regulation of Civil Dispute Resolution by Mediation in The Courts of Justice of Thailand".

1.2. The Questions

Based on the background, the author determine the formulation of the problem as follows:

1. What is the setting of civil dispute resolution by mediation in the Court of Thailand?
2. What are the advantages and disadvantages of civil disputes settlement regulation by mediation in the Court of Thailand?

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1.3. Methodology

This research is a normative legal research or legal research literature that a research conducted by examining the library materials or secondary data.\(^{307}\) In this research the author discusses based on theories, legislation, thesis, legal journals, papers and references relevant to the research undertaken.

The approach in the research is the approach of legislation, because that will be examined are the various rules of law that became the focus as well as the central theme of a research.\(^{308}\) Therefore, in this study the author uses the statute approach, this approach is done by reviewing all laws and regulations relating to legal issues presented,\(^{309}\) while the author can know and get answers about the issues between the provisions of the law - invited by the philosophy.

The basic materials in this research are primary legal materials, secondary law materials and tertiary or supporting legal materials.\(^{310}\) The source of Primary Law material used is The Civil Procedure Code of Thailand, Regulation of the Judicial Administration of the Commission of Mediation B.E. 2544 (2001) Thailand, and The Supreme Court Regulation (Perma) No. 1 of 2008 on Court Mediation Procedures of Indonesia. Then the secondary and tertiary legal materials include the results of symposia, scientific essays, literature in the form of textbooks, legal journals, legal theories, statistical reports and materials from the internet.

In the procedure used is documentation study by collecting legal material in the form of legal literature search and records to include quotations and other information done off line, which is obtained from the Office of Songkhla Provincial Court, Southern Thailand and on line through the official website General Court in Thailand www.adro.coj.go.th., www.iad.coj.go.th. and https://www.google.com. After collecting of legal materials, in the next stage the author performs a qualitative analysis. In this qualitative analysis the data is defined and classified systematically.

2. RESULT AND DISCUSSION
2.1. Mediation Arrangement in the Courts of Thailand.

Alternative Dispute Resolution (ADR) is the most important part of the legal system in the Kingdom of Thailand, not only in Indonesia, Thailand has also ratified the 1958 United Nations Convention in New York, USA. Furthermore, the Alternative Dispute Resolution (ADR) in Thailand is governed by the Arbitration Act B.E. 2545 (2002) Thailand. The existence of mediation as a dispute settlement in court was corroborated by The Civil Procedure Code since 1934 in Thailand, later confirmed by the birth of the Regulations of the Judicial Administration Commission on Mediation B.E. 2544, which governs the mediation process in court.

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\(^{310}\) *Ibid.*, hal. 38
Mediation is an effective way of dispute resolution in the Courts of Thailand, it can create harmony and peace to the parties and reduce the number of cases that follow the trial process. According to the author's observation, in its implementation, mediation as a dispute settlement in court is actually applied in Thailand.

Mediation in court is set out in the Regulations of the Judicial Administration Commission on Mediation B.E. 2544. In the Regulations of the Judicial Administration Commission on Mediation B.E. 2544 is not mentioned in detail about the meaning of mediation, but according to the author's official website can be from the International Affair Division, Office of the Judiciary in Thailand, “Mediation is a means of dispute resolution facilitated by a neutral third person who assists the parties in finding mutually acceptable solution”, neutral third parties are mediators who assist the parties in the negotiation process to seek for possible dispute resolution without resorting to the disconnection or enforcement of a settlement.

Next is the mediator by Article 3 Regulations of the Judicial Administration Commission on Mediation B.E. 2544, “......Mediator means a judge, a court official, a person or a group of persons duly appointed as mediator to assist the Court in mediating disputes under these regulations......”,

The mediation process assisted by the mediator is defined in Chapter 2 Part, Article 6 Regulations of the Judicial Administration Commission on Mediation B.E. 2544. The article explains that if a civil dispute filed in court will follow the mediation process, then the judge or the judicial chief may appoint one or more judges, court officials or other persons to mediate in the mediation proceedings of the court.

The appointment and dismissal of mediators in the mediation process in Thai courts is also provided in Article 8 and Article 9 of the Regulations of the Judicial Administration Commission on Mediation B.E. 2544. The Regulation explains that if there are no registered mediators in the court, the Chief Judge may appoint a judge or court official to become a mediator, and if in the court there is no registered mediator, no judges and other court officials are at work, the parties, may use the services of mediators from outside the court, but the costs to such mediators shall be borne by the parties.

Further regulation in Article 11 and Article 12, in this provision makes it clear that after the election of a mediator, the elected mediator must have a letter of appointment from the court, the mediator must release all of his personal interests in connection with the parties to the dispute. If the mediator has a negative relationship and objective to the parties, or represents one of the parties or other matters that may affect the neutrality in the mediation process, then the mediation process shall not proceed and the mediator shall be replaced.

Regulations of the mediation process are also set out in Article 15-17 in Regulations of the Judicial Administration Commission on Mediation B.E. 2544. This provision explains that in the mediation process, the parties can appoint legal representatives as their lawyers, but must be proven by their power of attorney letter, before the mediation process begins, the parties must enter into a written agreement on the willingness of the parties to follow the mediation process and comply with the mediation process. Concerning the mediation process is also provided for in Article 18 until Article 21 of the Regulations of the Judicial Administration Commission on Mediation B.E. 2544. The regulation describes the mediation process, starting from entry into mediation in court, the parties agreeing to enter into the mediation process, or

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the court has set a date to mediate before the date of the hearing, any party wishing to elect mediation in the settlement of its dispute can contact the mediation section of the court.

Before the mediation process begins, the court may arrange for mediation, regardless of the date of filing the lawsuit until the date of the commencement of the first hearing. Mediation on or after the date of the hearing, on such date or other date, if the parties agree to a mediator who will assist the mediation process, whether submitted by themselves or as determined by the court. The court may order in a court memorandum to file the case to the mediation section of the court. The parties then contact the court and agree on a date for mediation. If the dispute can not be resolved by mediation, the proceeding proceeds in the courtroom and the parties can not make all the facts, statements and evidence mentioned during the mediation process as evidence in the proceedings before the judge, that the process of mediation is closed. The timing is not set clearly in the provisions, but the time for mediation depends on the complexity of the dispute, but usually takes 1-6 months. The mediation process of the parties is not subject to any fees in the mediation process in court. Mediation not only benefits the parties, but also increases the efficiency of proceedings in court. Some of the benefits, such as saving time and money, achieving the desired solutions and in line with the needs of the parties, preserving the relationship between the parties to the conflict, the agreed outcome having legal certainty, reducing the accumulation of cases in court, reducing the workload of judges, can spend more time on more complicated and other cases.

Generally mediation regulations in Indonesian and the Court of Thailand are relatively similar, but still have some differences. In summary the difference can be seen in table 1 as follows:

Table 1: Differences in Mediation Regulations between Indonesian and Thailand.

<table>
<thead>
<tr>
<th>No</th>
<th>Comparative Aspects</th>
<th>Indonesia</th>
<th>Thailand</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Mediator</td>
<td>Mediator chosen by the parties</td>
<td>The mediator is elected by the Chief Justice or the Chief Judge.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Allowing the judge of the court examiner to become a mediator.</td>
<td>- There is no rules that allows the judge of the court examiner to become a mediator.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Not clearly regulated about the registration process of mediators.</td>
<td>- Registration of mediators is clearly regulated.</td>
</tr>
<tr>
<td>2.</td>
<td>Mediator Supervision</td>
<td>There is no control over the performance of mediators.</td>
<td>Existence of supervision on mediator performance by court.</td>
</tr>
<tr>
<td>3.</td>
<td>Involvement of lawyers and legal experts in the mediation process.</td>
<td>There are regulations allowing lawyers and legal experts, generally the parties present their legal counsel. The parties may present the expert if necessary under the agreement of the parties to the dispute.</td>
<td>Does not require the presence of a lawyer, there is or not, the mediation process will continue. If necessary experts or related persons may also be present.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- There is an arrangement ordering the parties to submit a case resume.</td>
</tr>
</tbody>
</table>
2.2. Advantages and Disadvantages of Mediation Regulations in The Court of Thailand

The regulation of mediation in Thai courts is regulated in the Regulations of the Judicial Administration Commission on Mediation B.E. 2554. In the provisions have different advantages and disadvantages with the provisions of mediation in the Indonesian Courts. The advantages of these provisions include, firstly in the Regulations of the Judicial Administration Commission on Mediation B.E. 2554, clearly regulates the appointment and termination of mediators as defined in Article 6 until Article 13. The mediator shall have no interest in the parties to the dispute as defined in Article 11 and Article 13. The regulation explains if the mediator has an interest in the parties then the mediation process fails and the mediator must be replaced with another mediator by the judges, so the mediator must be neutral in accordance with the mediator characteristics set out in the law.

The provisions of the mediator are listed in court and the requirement to be a mediator, so that the mediator is indeed a professional legal practitioner, as regulated under Article 27 until Article 37. Intensive mediators are also clearly regulated in the regulation. The regulation explains the supervision of the mediator, so the mediators are completely neutral and able to perform their duties properly. The Regulations of the Judicial Administration Commission on Mediation B.E. 2554 in Thailand, nor does it oblige the parties to the dispute to bring a lawyer or attorney, but where required the parties may be accompanied by their lawyers, but the parties are permitted to continue the mediation process without lawyers or attorneys.

Mediation in court regulation provided under the Regulations of the Judicial Administration Commission on Mediation B.E. 2554, also has disadvantages. The disadvantages in such regulations are not clearly defined as to who pays the costs when using the services of mediators who come from outside the court, or any other costs required in the mediation process, thus causing one party to not focus on dispute resolution, and mediation being ineffective. The regulations do not specify the deadline for mediator appointment, the length of the mediation process, the time of separation of the mediation process and the process of examining cases, sometimes this makes the duration of civil disputes dispute by court.

Mediation regulation in Indonesian courts provides an opportunity for parties to communicate remotely in the mediation process, but the disadvantages of the Regulations of the Judicial Administration Commission on Mediation B.E. 2554 in Thailand, is not set about such
long distance communications. In summary the advantages and disadvantages of mediation rules in Indonesia and Thailand courts can be seen in table 2.

<table>
<thead>
<tr>
<th>No.</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Arranged clearly about the procedure of mediation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not requiring lawyers or attorneys in the mediation process</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Regulated about the time limit of mediator determination and mediation process.</td>
<td>Regulated on the supervision of mediators.</td>
</tr>
<tr>
<td>3</td>
<td>Mediators are preferred by the parties.</td>
<td>There is a clearly regulation of mediator requirements.</td>
</tr>
<tr>
<td>4</td>
<td>Regulated about the remote communication.</td>
<td>The judge who examines the case is not a mediator.</td>
</tr>
</tbody>
</table>

### 3. CONCLUSIONS

Based on the results of research can be concluded that mediation in Thailand under The Regulation of the Judicial Administration of the Commission of Mediation B.E. 2554, consists of 2 chapters, 6 sections and 37 chapters. Regulated matters start from the definition of dispute, court chairman, mediator, court official, Secretary General in Court, judicial authority, appointment and dismissal of mediator, mediation process starting from the preparatory phase, opening, negotiation and solution, mediation process termination arrangement, mediation, registration and remuneration of mediators.

In Thailand, the mediator is elected by the chairman of the court or the chair of the Panel of Judges, and the case investigating judge can not be a mediator, there is a clear set of mediator registration and supervision of the mediator's performance. Furthermore, in Thailand does not oblige the parties to present a lawyer. Prior to the mediation process there is an rule requiring the parties to submit the case resume and make a written consent to follow the mediation process and to comply with the rules. Although it does not regulate the deadline of mediation and remote communication and the regulation of the mediation stages is unclear, but the advantages of mediation in The Regulation of the Judicial Administration of the Commission of Mediation B.E. 2554, among others, the provision of a clear registration of mediators and regulating the supervision of mediators by the courts, whereas
in Indonesia the regulation of mediator registration is not yet clear and the regulation of oversight of the mediator does not yet exist. In Thailand it is not permissible for a probationary judge to be a mediator and does not require a lawyer in the mediation process, so the presence or absence of a lawyer, the mediation may continue.

The author hopes for a renewal in the mediation regulations in the Indonesian court for the future, in the Indonesian setting the judge should not be allowed to mediate, because it will affect the judge's neutrality in deciding cases if the mediation process fails and proceeds to the litigation process in court, the presence or absence of legal counseling of the parties and the need for clear regulation of the registration and supervision of the mediator so that the mediator is expected to be a professional legal practitioner and mediation process effectively and efficiently.

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ABSTRACT

In Malaysia, damages for personal injuries and causing death, other than homicide, is primarily governed by the Civil Law Act 1956 (Amendment 1984). Quantum for damages for personal injuries are said to be higher than the fatal case which is confined to bereavement, funeral expenses, estate claim and dependency claim. If the injured are alive and suffer resulting from the incident, there are four types of damages that can be claimed, namely: (i) pain and suffering and loss of amenities, (ii) loss of future earnings, (iii) loss of earning capacity and (iv) future care expenses. For most road accident cases, the root cause is said to be negligence. The principles of negligence under the law of tort is used to determine liability. Using road traffic accident cases as the focus of the study, this paper examines in details the current situation, address issues, the role of insurance company as well as show where changes to the law are necessary.

Keywords: damages, personal injuries, road accident, civil law.

1. INTRODUCTION

For a person suffering personal injuries as a result of any tortious act committed upon him, the usual redress is an award for damages. The principle used in *restitutio in integrum*. It means to restore the plaintiff to the position he or she would have been in if the relevant tort had not been committed. It is not to enrich the injured but the approach is to put the injured party in a position he would have been in had he not been injured. The goal of this *restitutio* concept is that the plaintiff is to be fully compensated for his loss as far as is possible by monetary compensation.

In Malaysia, damages for personal injuries and causing death, other than homicide, is primarily governed by the Civil Law Act 1956. CLA 1956 was introduced as a continuation from Civil Law Ordinance 1937. The Act was amended in 1972 and in 1984 a new amendment was made to include section 28A on damages in respect of personal injury. The then amendment is said to be making changes to the law by putting in the method of calculation and assessment of damages if the injured persons are alive and suffer resulting from the incident. Thus, four types of damages can be claimed, namely: (i) pain and suffering and loss of amenities, (ii) loss of future earnings, (iii) loss of earning capacity and (iv) future care expenses. Quantum for damages for fatal cases remain the same and are confined to bereavement, funeral expenses, estate claim and dependency claim. The road traffic accident is dealt
with road traffic law, personal injury law and also insurance law. The accident is investigated by the traffic police and the police report is required to be made by both parties involved. Once the liability is determined, the case can be settled either through the insurance company or be referred to the court. Cases that are considered as straightforward and without any dispute, can be referred to the insurance company. The notice must be given by the insured to the insurer as stipulated under the Insurance Act. If the case cannot be settled immediately, particularly those involving serious or fatal injuries and dispute occurs as to determining liability and quantum, then it will go to court. The principle of negligence under the law of tort will be used to determine liability of parties involved and the consequences of liability in terms of compensation is dealt with by Civil law Act 1956. The fault party is not necessarily be found liable 100%, in certain cases, the liability may be apportioned between both parties depending on the facts of each case. The article looks at selected cases to see the interface between the law with the quantum of awards for death and personal injuries and see whether it reflects the real problem of injuries suffered by the victims.

2. METHOD

This paper analyses provisions under the Civil Law Act 1956, the main references for claim when death or personal injuries occur are section 7, 8 and 28A of the Act. Then we go on examining the decisions on quantum of damages handed down by various courts for various types of injuries and losses suffered by the victims. For this we used reported cases, selected according to headings of injuries, to evaluate how the quantum of damages were awarded.

3. RESULTS AND DISCUSSION

The Civil Law Act 1956 is the main reference and it contains seven parts with provisions regarding fatal accidents and survival of causes of action, tortfeasors and award of interest; contributory negligence and common employment, frustrated contracts, apportionment, disposal, devolution of property and miscellaneous. The Act was amended in 1984 where section 28A was included spelling out the compensation benefited injured persons or the defendants of deceased persons. Quantum for damages for personal injuries are said to be higher that the fatal case which is confined to bereavement, funeral expenses, estate claim and dependency claim. If the injured are alive and suffer resulting from the incident, there are four types of damages that can be claimed, namely: (1) pain and suffering and loss of amenities, (2) loss of future earnings, (3) loss of earning capacity and (4) future care expenses. Damages payable are divided into two types: general and special damages. Special damages are referred to as the plaintiff’s actual pecuniary loss between the date of the accident and the date of trial. It consists of out-of-pocket expenses like hospital bills, operation cost, repair cost and actual loss of earnings during the period of total incapacity. Generally it can be calculated exactly. All special damages must be specifically pleaded and proved, otherwise no award will be made as decided in *R.J McGuiness v. Ahmad Zaini* ([1980] 2 MLJ 404). It is also the duty of the plaintiff to mitigate his loss. General damages represents the loss to the plaintiff that cannot be precisely quantified like pain and suffering and so on.

3.1 Death resulting from road traffic accident

Part 3 of the Act is entitled Fatal Accidents and Survival of Causes of Action. For compensation to the family of a person for loss occasioned by his death, section 7(1) provides that whenever the death of a person is caused by wrongful act, neglect or default, the family as the heir, have the rights to initiate an action and recover damages. The action can be taken by family members who are limited to the wife, husband, parent, and child, if any, of the person whose death has been so caused and shall be brought by
and in the name of the executor of the person deceased. Below are the damages that can be claimed and awarded by the court to be paid by the defendant and/or insurance company:

- a. Funeral expenses of the person deceased if such expenses have been incurred by the party bringing the action;
- b. Bereavement which is RM10,000.00 for the benefit of the spouse or his parent if the deceased was a minor and never married. This total is to be divided equally between them.
- c. Loss of earnings (section 7(3)(iv)). For loss of earnings, the calculation is made as follow:

\[(a)\] take into account that where the person deceased has attained the age of 55 years at the time of his death, his loss of earnings for any period after his death shall not be taken into consideration; and in the case of any person deceased, his loss of earnings for any period after his death shall be taken into consideration if it is proved or admitted that the person deceased was in good health but for the injury that caused his death and was receiving earnings by his own labour or other or other gainful activity prior to his death;

\[(b)\] take into account that in the case of a person who was of the age of thirty years and below at the time of his death, the number of years’ purchase shall be 16; and in the case of any other person who was of the age range extending between thirty one years and fifty four years at the time of his death, the number of years’ purchase shall be calculated by using the figure 55, minus the age of the person at the time of death and dividing the remainder by the figure 2.

In the case of Muhammad Hanif Ishak v. Mohammad Syazwan Mohamad Fuad & Anor ([2017] 1 LNS 372, the plaintiff claims the sum of RM 1,500.00 per month at the multiplier of 16 years adding up to RM 288,000.00. The defendant however submitted that the award should be on the basis of RM 200.00 per month for 16 years totalling RM 38,400.00. The learned Sessions Court Judge meanwhile awarded the plaintiff RM 500 per month with the total award on the basis of 16 years multiplier being RM 96,000.00.

3.2 Injuries Resulting from Road Traffic Accident

Damages for personal injuries claim can be divided into non-pecuniary and pecuniary losses as will be discussed below:

i. Non-pecuniary loss

a) Pain and suffering.

Pain is referred as physical hurt or discomfort attributable to the injury itself or consequent upon it. Suffering means the mental or emotional distress which the plaintiff may feel as a consequence of the injury (Ahangar, 2012, 40) For this, section 28A(2)(b) provides that if the plaintiff’s expectation of life has been reduced by the injury, the Court, in assessing damages in respect of pain and suffering caused by the injury, shall take into account any suffering caused or likely to be caused by awareness that his expectation of life has been so reduced. In the case of Mohd Arif Abdullah v Mohamed Mat Nor & Afiqah Wira Construction Sdn Bhd ([2015] 5 LNS 9, the court awarded a total of RM110,000.00 to the plaintiff who
had severe traumatic head injury with intracranial Haemorrhage (RM100,000.00), soft tissue injuries (RM5,000.00) and scars (RM5,000.00)

ii. Pecuniary loss

b) Loss of Future Earning:

For loss of future earnings, section 28A(2)(c) states that:

(c) In awarding damages for loss of future earnings the Court shall take into account—

(i) that in the case of a plaintiff who has attained the age of fifty-five years or above at the time when he was injured, no damages for such loss shall be awarded; and in any other case, damages for such loss shall not be awarded unless it is proved or admitted that the plaintiff was in good health but for the injury and was receiving earnings by his own labour or other gainful activity before he was injured;

(ii) only the amount relating to his earnings as aforesaid at the time when he was injured and the Court shall not take into account any prospect of the earnings as aforesaid being increased at some time in the future;

(iii) any diminution of any such amount as aforesaid by such sum as is proved or admitted to be the living expenses of the plaintiff at the time when he was injured;

Section 28A(2)(d) provides that in assessing damages for loss of future earnings the Court shall take into account that—

(i) in the case of a person who was of the age of thirty years or below at the time when he was injured, the number of years’ purchase shall be 16; and

(ii) in the case of any other person who was of the age range extending between thirty-one years and fifty-four years at the time when he was injured, the number of years’ purchase shall be calculated by using the figure 55, minus the age of the person at the time when he was injured and dividing the remainder by the figure 2.

In brief, the loss of future earnings is calculated by multiplying the multiplier (the annual loss of future earning) with multiplicand (the number of years from the trial date until the year that he or she is predicted to separate (retire) from workforce). Multiplier means pre-accident earning minus post-accident earning, while multiplicand would be retirement age minus the age at trial date.

In *Mohd Nur Akmal Yahya & Anor vs. Rickson Akup & Anor* ([2017] 5 LNS 1), who lost his future earning capacity altogether due to the accident. A week prior to the accident that left him with serious permanent cognitive disabilities and impairment, the plaintiff received a job offer letter from Malaysia Airports Berhad with a monthly salary or RM1,100.00. He accepted the offer and soon after that MAB booked him a flight ticket to Kuala Lumpur to start working. Unfortunately, the accident robbed everything of him. The court decided that based on the evidence that the plaintiff was in good health, had no disabilities, therefore, he had lost the future earning capacity which is as follows: (RM1,100.00 x 12 x 16 = RM211,200.00). However, due to the seriousness of his condition, the court held that it is not suitable to award him the loss of earning, because he has permanent cognitive impairment and requires
lifetime care, and the insurers must not be allowed to scuttle the claims under the “duty to mitigate” because what is required is optimal care. Therefore, he was awarded cost for future nursing care of RM2,117,908.00. For pain and suffering out of the injuries sustained, he was given RM287,000.00 and the breakdown are for these injuries:

a. Right temporal skull fracture with pneumocranium and small EDH (extraduralhaenatoma) RM150,000.00
b. Left ear noted dried blood clot – RM5,000.00
c. Left ear moderately conductive hearing loss - RM15,000.00
d. Loss of smell from both nostrils (anosmia)- RM20,000.00
e. Nasal bone fracture -RM8,000
f. Zygoma body right fracture were injuries clearly- RM8,000.00
g. Left centralincis or tooth missing- no award due to no proof
h. Fracture of tooth- RM2,000.00
i. Peri-occular swelling of eyes (right 5mm and left 3mm) during first admission in Sarawak General Hospital (SGH) and had facial asymmetry with slight periorbital ecchymosis and swelling on face during 2nd admission in SGH – RM3,000
j. Right eye shows a squint and diplopia (both right and left) - RM10,000.00
k. Loss of vision 50% on both eyes- RM60,000.00
l. Scar of about 1 cm over the right face- RM1,000.00
m. Loss of Consciousness RM5,000.00.00

For loss of future earning capacity, the principle from the case of Mohd Nur Akmal is a good example whereby the earning capacity must be clear as to what capacity means. Unlike the case of Yang Yap Fong & Anor v. Leong Pek Hoon & Anor [1987] CLJ (Rep) 419, the appellant was just 19 years at the date of hearing and was not in any employment. But there was a prospect of getting one in the future soon after he qualified himself as a TV mechanic for which as stated earlier his father intended to send him as soon as he had sufficient funds. The principle applicable to future loss of earning capacity and its distinction with future loss of earnings are explicitly discussed in Ngooi Ku Siong & Anor. v. Aidi Abdullah [1984] 1 CLJ (Rep) 294 by the Federal Court. The proper test to be applied is whether sometime in the future, due to the effect of the injuries sustained by him, the plaintiff will face a substantial risk of either losing his job or getting a less paid employment. It does not matter whether the plaintiff was in employment or not at the time of the trial so long as Court is satisfied from evidence that there is a real or substantial risk that his earning capacity will be affected in the future. Moeliker v. A. Reyrolle & Co. Ltd. [1977] 1 All ER 9 and Cook v. Consolidated Fisheries Ltd. [1977] 1 CR 635, 639 are some of the cases in which a claim for loss of earning capacity was allowed to plaintiffs who were in employment and whose earnings were not affected at the material time.

For a 50 year old like Badaran Ponniah v Salma Ali [2014] 5 LNS 84, the accident caused him his right leg which had to be amputated up to the knee. Apart from prosthetic cost of RM30,000, he received loss of earning, which was calculated based on multiplier (30 months) and multiplicand was RM1100.00 (rm50.00 per day for 22 days in a month). So, RM1100.00 x 30 months = RM33,000.00.

In Teoh Ching Hwa v. Mohd Nor Arif Ahmad & Anor and Another Case [2017] 2 CLJ 107 plaintiff's claim in the Sessions Court is for special damages, general damages, interests and costs for loss arising from a road accident which occurred on 23 April 2011 at about 3 to 3.05am between the plaintiff, as a pedestrian, and the motorcycle which was ridden by the first defendant on the road. As a consequence of the accident, the plaintiff suffered serious injuries and losses. Based on the finding, the trial judge
found the plaintiff negligent by 20%, and the defendant negligent by 80%. The decision was affirmed by the High Court. The trial judge, in awarding loss of future earning, considered the following:

The net pay was RM3,045.10, but deducted about RM1,200.00 as per cost of living. Therefore, the total monthly earning was RM1,845.10 x 15 years and 4 months. So, the loss of future earning amounting to RM339,498.40.

Judge Yeo Wee Siam viewed that the award of RM339,498.40 for loss of future earnings is reasonable and ought to be maintained. In fact, this amount can never make up for the fact that the plaintiff, who has a bachelor degree from the University of Technology, Sydney, and was an Account Manager prior to the accident, is now classified as "Orang Kurang Upaya".

The trial judge awarded general damages of RM247,000.00 as follows:

(i) Trauma head injury (GCS 13/15, bilateral periorbital haematoma, left frontal and temporal skull vault fractures extending to sphenoid wing, fractures of orbits, maxillary, ethmoid and frontal sinuses, epidural haematoma, left frontal and left temporal contusions and subarachnoid haemorrhages, right upper limb weaknesses and dysphasia, craniotomy and tracheostomy done, right sided hemiparesis, impaired immediate and short term memory, impaired concentration, independent of all activities of daily living, impaired of speech, able to walk independently and able to reason and make sensible judgements) - RM160,000.00.

(ii) Total blindness of left eye - RM80,000.00.

(iii) Scars (Laceration would at left eyebrow 3 x 2cm and 20cm scar at left region of scalp behind the hairline, tracheostomy scar and bruises over the face abdomen and right knee with abrasions over his left flank and face) - RM7,000.00.

In Ong Ah Long v. Dr S Underwood [1983] 2 CLJ 198; [1983] CLJ (Rep) 300; [1983] 2 MLJ 324 at p. 325 the Federal Court laid down the principle for awarding loss of earnings and profits as follows:

"The general principle is that an injured plaintiff is entitled to damages for the loss of earnings and profits which he has suffered by reason of his injuries up to the date of trial and for the loss of the prospective earnings and profits of which he is likely to be deprived in the future."

However, as submitted by learned counsel for the plaintiff, at the time of the trial, it was about three years and nine months after the accident. Yet, at that time the plaintiff had the following problems:

(a) Difficulty in expressing himself, word finding difficulties, undergoing speech therapy
(b) Slow at counting, difficult to read and understand
(c) Finding it difficult to converse in Bahasa Malaysia
(d) Occasional headaches
(e) Forgetful
(f) Angry and depressed at times
(g) Cannot drive
(h) Cannot play badminton and difficult to aim at the shuttlecock
(i) Right upper limb weakness; right-hand dexterity is reduced

Thus, it can be safely concluded that it is obvious that in his poor health condition, he could not be
gainfully employed. It is highly probable that at that point in time, the plaintiff would not be able to perform work as an account manager, in the same manner that he was doing before the accident.

c. Future Care Expenses: Nursing care.

For those required lifetime care, the court will consider the nursing care. The calculation is based on the standard cost estimated by a nursing house and the duration of care considered by the court. The rate used in practice is taken from nursing house like Gleneagles Hospital and Cheras Rehabilitative Centre, both in Kuala Lumpur.

COMPENDIUM 2014: ITS SIGNIFICANCE AS GUIDELINES FOR JUDGES

In order to help judges adjudicate claims for personal injuries, case laws and Compendium of Personal Injuries 2014 are used as reference, apart from the law. Compendium of Personal Injuries was first constructed in 2010 by the Attorney General’s Chamber of Malaysia and was revised in 2014 by a Taskforce Working Committee under the Malaysian Bar Council. As guidelines, The Compendium is aimed to facilitate the court in determining the appropriate amount of compensation to be awarded. The Compendium offers range, not the exact amount, and this would allow the judge to use his judicial discretion after considering facts of the cases before him or her. The insurer, i.e the insurance company will burden the liability imposed by the court and will proceed with the payment if the dispute had been settled.

2. SPECIAL DAMAGES

As mentioned earlier, special damages must be specifically pleaded and the burden of proof lies on the plaintiff. Even though in all civil cases, the balance of probabilities apply, Justice M. Shankar emphasised in 1987 case of Thrimalai and Anor vs. Mohd Masry bin Tukimin ([1987] 1 MLJ 153) that “special damages must be strictly proved. To my mind the evidentiality burden here goes beyond establishing the claim on a balance of probabilities. The figures put forward for special damages must come as close to mathematical certainty as the circumstances of the case would allow.”

For that matter, documentary evidence to support the claim is properly necessary and should be marked as exhibits before the court can decide on its amount. The typical claims are:

a. essential item like prosthesis for an amputee
b. receipt of the repairer for cost of repairs like damage or destruction to motor vehicle
c. funeral expenses is also allowed based on judicial notice given earlier
d. loss due to theft after accident. Loss of jewellery was recoverable in Parvathy & Ors. vs. Liew Yoke Khoon ([1984] 1 MLJ 183;
e. cost of medical expenses
f. traditional treatment

Example of case for special damages are for cost borne by the plaintiff and in Mohd Arif Abdullah v Mohamed Mat Nor & Afiqah Wira Construction Sdn Bhd [2015] 5 LNS 9 are as follow:

a. medical report cost (RM100.00)
b. damage to shirt and shoes (RM100.00)
c. police report, sketch plan and key (RM12.00)
d. JPJ search (RM10.00)
e. expert medical report (RM1,963.00)
f. Hospital bill (RM943.50)

In Nur Akmal’s case, about RM422.00 were awarded and the list are:

1. SGH Bill No. 1066799 dated 27/2/2013 for RM196.00 with Payments Receipts No. A905604 for RM46.00, No.A902266 for RM100.00 and No. A904963 for RM50.00 totalling **RM196.00**;
2. Cover letter from SGH dated 1/3/2013 and Receipt A90313 for Medical Report for **RM40.00**;
3. SGH Bil No. 1067412 for RM147.00 with Payment Receipt No. A904962 for **RM147.00**
4. Receipts for payment of various police reports lodged, rough sketch plan and investigation result in respect of the said Accident for **RM24.00**;
5. JPJ search Receipt No. AN726061for **RM10.00**

In Teoh Ching Hwa v. Mohd Nor Arif Ahmad & Anor and Another Case [2017] 2 CLJ 107 l, special damages pleaded and allowed, not all, are about RM61,880.80 comprising of:

(i) Medical costs of RM61,115.80.00;
(ii) Expenses for speech therapy - RM33,978.
(iii) Bill for treatment at Hospital Kuala Lumpur ("HKL") - RM135.
(iv) Expenses for return trips made by family members when visiting the plaintiff - RM500.
(v) Costs of police report, search with JPJ on sketch plan - RM40.
(vi) Costs of medical report from HKL - RM40 .
(vii) Damage to clothes - RM50.00

**ANALYSIS: ISSUES AND SUGGESTIONS**

Several issues arise out of these four heads particularly concerning 55 years as the ultimate year of getting earnings out of employment. No damages for loss of future earnings shall be awarded to a plaintiff who has already attained 55 years of age except for those who can prove that he is actually in employment above 55 years. Apart from that is the interpretation of “good health”. The requirement of good health as opposed to “poor health” is unclear. There are few suggestions that can be made:

1. In accordance with Section 3D CLA 1956 which says that The Yang Di-Pertuan Agong may from time to time by order published in the Gazette vary the sum specified in subsection (3A), it is timely that the amount of bereavement which is RM10,000 be increased to RM20,000 or more.
2. In assessing the loss of earning occasioned by the death or by the injuries so suffered by the victims depriving him or her from any employment, the age of retirement nowadays has increased to sixty and in specific sectors like education or judiciary, the age can be more than sixty. Therefore, it is also a good consideration to amend the age limit for claim from 55 to 60 or 65. This has also been suggested by the judge sitting as Session Court in Kuala Lumpur, Mr Justice Nuaman Mahmud Zuhdi and supported by academic, Norila Abu Hassan. According to P. Balan, law professor, the 1984 Amendment Act has removed the discretion of judges to award damages for those who could work, or are working, after 55 years
3. The interpretation of earning. Courts are not consistent with the meaning of earning and how to calculate damages for loss of earning. All earnings existed during the accident must be proved. In certain cases the exact number of earning was reduced due to the fact that total spent for work (like petrol, travel cost, food and all items related to the employment) was no longer applied because of the accident.

4. Loopholes in compendium. According to medical expert, the range created under the compendium which is to be referred by judges in making an estimation is too low, incomplete and need further details. For example, inadequacy of injuries types, the under-rated value of facial injuries and so on.

5. Interpretation of a good health. It is still questionable whether a person with any type of diseases but healthy and actively in employment is interpreted as not in good health?

CONCLUSION
Damages in road traffic accident are allowed not only for past and present losses, but also for future losses. Losses can be in terms of monetary which is called pecuniary and also non-pecuniary like all sorts of pain and sufferings which cannot be valued in exact but can be calculated based on Compendium for Personal Injuries Awards 2014 introduced to assist court in estimating damages to be awarded. However, this Compendium can be improved by consulting the medical experts who can advice on the range of values of bodily parts. In all road traffic accident cases, all are to be paid after finding fault and liability by the liable party i.e the defendant, through the insurance company as the insurer of the defendant driver. Therefore, it is important to notify the insurer when the accident took place, failure to do so will result in non-payment or rejection of claim.

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6. REFERENCES


REVISITING TRAUMA: AN ECOFEMINIST READING ON HAN KANG’S THE
VEGETARIAN

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ABSTRACT

The dualistic rationale between male and female has drawn the parallelism to culture/nature polarity where men are associated to culture and women are closer to nature. Equating female to such a claim will tend to place women in the locus of passivity as opposed to male counterparts. Some feminists detest such association when women are closely associated to nature. However, this study intends to look at the spiritual side experienced by Yeong-hye, the woman protagonist in Han Kang’s The Vegetarian and hence interpret the concept of “spirituality” as a form of women empowerment. This is in accordance to the idea brought forward by ecofeminist spiritualities; that it embodies a kind of power, including personal power, which is a form of empowerment. Hill et al. and Emmons and Crumpler define “spirituality” as “the experiential and personal side of our relationship to the transcendent or sacred”. In other words, this present study perceives the Yeong Hye’s actions of blending herself into nature as a form of empowerment rather than a form of “female malady”. In addition, this paper looks at how she achieves a spiritual identification with nature. Hence, the present study will explore the concept of spirituality that said to have an integrative and harmonizing function. The function involves our inner unity and our relationship and connectedness with others and a broader reality that powers our ability to be transcendent.

Keywords: Ecofeminist spiritualities; Female Malady; Inner Awareness; Personal Integration; Trauma

1. INTRODUCTION

In Korean culture, “eating is a cultural experience for everyday or every meal” (Chung, Yang, Shin, & Chung, 2016). Meat is considered as the representative in Korean eating culture. In Han Kang’s The Vegetarian, the unusual transformation of Yeong-hye, the woman subject in the novella is captured from three different perspectives; namely Yeong-hye’s husband, Mr. Cheong, Yeong-hye’s unnamed brother-in-law, and her sister, In-hye. According to Chon (2007), “Koreans enjoyed eating meat, and livestock was a valuable asset”. By adopting a new eating lifestyle, Yeong-hye is being labelled as abnormal as vegetarianism is uncommon in the meat-eating society. Carol J. Adams (2010) argues that “meat is a constant for men, intermittent for women” as “meat eating measures individual and societal virility” (p.48) Adams further claims “in the mythology of patriarchal culture, meat promotes strength; [and] the attributes of masculinity are achieved through eating these masculine foods.” (p.56) According to Marti Kheel (2004), “Meat eating is viewed as a compulsory institutional norm that is imposed, managed, organized, propagandized, and maintained by force for the purpose of ensuring male-dominated society’s rightful access to nonhuman animals and to their flesh.”
The main subject of the study, namely Yeong-hye, her voice is marginalised in the novella. Yeong-hye’s bits and pieces of her thoughts are reflected via her internal monologues in the novella. As mentioned earlier, Han Kang’s *The Vegetarian* is divided into three sections, and narrated from different characters, mirrors women’s madness from stereotypical and misogynist perspectives. The present study examines the root of her abnormal behaviour. The present study scrutinises Yeong-hye’s trauma by examining her internal monologue, her dreams and the other characters’ narrations about her. The collective narratives from the other characters helped in the construction of Yeong-hye’s identity as well as to trace the root of her traumatic experiences.

The transformation of Yeong-hye in Han Kang’s *The Vegetarian* is perceived as a form of women’s madness. Women, being placed at the bottom of the hierarchical pyramid are often more susceptible to psychological disorder. Madness is therefore one of the aspects that is always associated with women. Hence, women’s madness is widely known as the “female malady” (Showalter, 1987). However, the present study perceives the association of women to nature as a form of empowerment. Instead of being viewed passively as a form of women’s madness, the women-nature connection ignites Yeong-hye’s inner awareness and personal integration, to revisit her traumatic experience, and hence to break through the stereotypical views on the issue of women’s sanity in the Korean culture. In order to dissect the root cause of Yeong-hye’s traumatic events, the present study examines the issue of women’s madness through the ecofeminist spiritualities perspective.

The term “ecofeminist spiritualities” entail stereotypical gender discrimination about women as closer to nature as compared to men. The dualistic boundary drawn between the two elements has reinforces the idea that women are less rational and more emotional as compared to their male counterpart. The association of women to nature is hence viewed as controversial, especially among feminists who are against such dualistic system that places women in the locus of passivity. Similarly, Karen Warren (2000, p.194) mentions that some of the ecofeminists “criticise ecofeminist spirituality as unacceptably essentialist and universalist”.

As mentioned earlier, (eco)feminists detests the association as it further marginalises them in the patriarchal society. Nevertheless, the present study argues that the dualistic system has to be re-examined and to reweave the boundary between sanity/insanity. The present study aims to unfold the “logical assumptions” that support the dualistic system. The logic behind such system has to be decentralised. Yeong-hye’s transformation depicts the notion of women empowerment, where she is given the power and strength to resist patriarchy, to break free from the social expectations and lead her to be transcendent. The aspect of spirituality plays a crucial role in dissolving the dualistic culture/nature-boundary and debunks the logical reasoning merely as some biased assumptions.

2. **THEORETICAL FRAMEWORK**

2.1 The Concept of Spirituality

“Spiritualism is a broad term covering multiple domains of meaning that may vary among different cultural, national and religious groups” (Roehlkepartain, Benson, King & Wagener, 2006; Tahakashi & Ide, 1999). The term “spiritual or spiritualism” is controversial in terms of its usage especially in feminist studies because of its common usage in some religions. In short,
it refers to the deepest values and meanings by which people seek to live. In other words, spirituality implies some kind of vision to the human spirit and of what will assist it to achieve full potential. Hill et al. and Emmons and Crumpler define “spirituality” as “the experiential and personal side of our relationship to the transcendent or sacred”. Similarly, Ursula King (2008, p.121) defines spirituality to be linked to all human experiences but has a particularly close connection with the imagination, with human creativity and resourcefulness, with relationships, whether with oneself, others, or a transcendent reality, often called Divine, God or Spirit.”

Hence, the present study adopts the definition of spirituality as discussed by Hills et al. and Emmons & Crumpler, where spirituality is used “to denote experiential and personal side of our relationship to the transcendent or sacred”. Roof (1999, p. 35) mentions that spirituality comprises of four main themes, namely (a) a source of values and ultimate meaning or purpose beyond the self, including a sense of mystery and self transcendence, (b) a way of understanding; (c) inner awareness and lastly (d) personal integration.

The present study focuses on the last two aspects; both “inner awareness” and “personal theme is stressed in the present study because the concept of spirituality is believed to contain an integrative and harmonizing function that involves our inner unity and our relationship and connectedness with others and to be a broader sense of reality that powers our ability to be transcendent (McGrath, 2006).

2.2 Ecofeminist Spiritualities

The subjugation of women by patriarchal rulings, alongside a dualistic system leads to the denial of equal status among women and men. Associating women to nature, for example, has chained them to this susceptible position. Under this dualistic system, women are perceived to be weaklings because of the rigid classifications assigned to women. Ursula King (2008) claims that “there exists a disconnection between humans, the earth and the Divine – a deep split that must be healed” (p.126). King further elaborates that “this is a very creation-centred spirituality where nature itself is experienced as hierophany, revealing the presence and beauty of spirit”. Nicola Slee (2004) states “Feminist spirituality, arises from the consciousness of women’s oppression and is a quest to overcome women’s marginalisation in religion as in every other sphere of life” (p. 176).

As mentioned earlier, (eco)feminists claim that spiritual ecofeminism reinforces harmful gender stereotype about women as closer to nature than men, less rational and more emotional than men. Associating women to nature seem to position them in the locus of passivity (i.e. weak, submissive, emotional etc). Similarly, Murray Bookchin was predominantly troubled with feminist spirituality, perceiving it the worst form of apolitical mysticism (Sturgeon, 1997, p. 37). Hence, Karen Warren (2000) claimed that “ecofeminists disagree about the nature and place of spirituality in ecofeminist politics and practice” (p. 193).

Contrary to the popular belief, Warren (2000) put forward the idea that ecofeminist spiritualities embody a kind of power, including personal power, which is a form of empowerment (p. 199). The spiritual association between women and nature is said to strengthen the personal power
(i.e. power to transcend beyond the sensual self). Therefore, this present study will look at the concepts of inner awareness and personal integration.

Spirituality takes us beyond ordinary daily experience and has a transforming effect on our lives and relationships. It is not just about being and experience, it also involves a search for higher values, inner freedom and things that give life meaning (Vergote, 2003, p. 83). Ursula King (2008, p.126) claims that “significant themes of ecofeminist spirituality are the connections between the bodies of women and the earth; the alignment with the seasons of nature; the dynamism and energy of life; and the interconnectedness of the web of life.” Therefore, women’s spirituality is believed to have its own inherent nature and integrity, and at the same time being fundamentally grounded in nature itself. (Sydee and Beder, 2001, p. 4)

3. RESULTS AND DISCUSSION

3.1. Yeong-hye’s Traumatic Experiences

The term “trauma” in Greek denotes “wound,” originally referring to an injury inflicted on a body. Based on Freud’s discussion, trauma is understood as a wound imposed not upon the body but upon the mind. The collective narratives from three different characters in Han Kang’s The Vegetarian help to build up the causes of Yeong-hye’s trauma. Embedded within the novella, there are some excerpts that reveal Yeong-hye’s internal monologue, which provides a platform for her to voice her wounds that seem to be accumulated since she was young, and later turned into her trauma. Trauma is generally associated to the sense of loss and fracture; however, the healing process will only took place when Yeong-hye confronts her own trauma. Therefore, the present study perceives Yeong-hye’s action of immersing into nature as a form of emancipation from the patriarchal experiences rather than a form of abnormality. Carolyn Merchant (1990) argues that “…while the pastoral tradition symbolized nature as benevolent female, it contained the implication that nature when plowed and cultivated could be used as a commodity and manipulated as a resource.” (p.8)

The first part of the novella entitled “The Vegetarian” is narrated from Mr. Cheong’s perspective, who is Yeong-hye’s husband. As described in the first section, he has a strained relationship with Yeong-hye as he always perceives her as an “unremarkable” woman. Their relationship shows the lack of communication between the husband and wife. Her further describes Yeong-hye’s physical appearance as “Middling height; bobbed hair neither long nor short; jaundiced, sickly-looking skin; somewhat prominent cheekbones; her timid, sallow aspect told me all I needed to know. (Han, 2015, p.11) Likewise, Yeong-hye is also “a woman of few words.” (Han, 2015, p.12) Their ordinary life and relationship start to crumble when Yeong-hye turns into a vegetarian. Yeong-hye’s drastic transformation is related to the roots of her traumatic experiences. Mr. Cheong states:

If it had all been just another instance of a woman’s giving up meat in order to lose weight then there would have been no need to worry, but I was convinced that there was more going on here than a simple case of vegetarianism. No, it had to be that dream she’d mentioned; that was bound to be at the bottom of it all. Although, as a matter of fact, she’d practically stopped sleeping. (Han, 2015, p.23)

The dreams that troubles Yeong-hye are related to her past experiences. The dreams are dark, bloody and aggressive. The dreams affect her physically and mentally in the waking world. The
recurring dreams cause Yeong-hye into an insomniac lifestyle. Yeong-hye’s dream exposed her vulnerability as she is troubled by it. She describes the dream as “Dark woods. No people. The sharp-pointed leaves on the trees, my torn feet. This place, almost remembered, but I’m lost now. Frightened. Cold” (Han Kang, 2015, p. 19). The dreams “come to me [Yeong-hye] more times than I can count, Dreams overlaid with dreams, a palimpsest of horror.” (Han, 2015, p.35). She exclaims “intolerable loathing, so long suppressed. Loathing I’ve always tried to mask with affection. But now the mask is coming off.” (Han, 2015, p.36) The dreams, somehow reflects Yeong-hye’s oppressive childhood. As mentioned by In-hye in the third section, she witnesses:

Yeong-hye had been the only victim of their father’s beatings. Such violence wouldn’t have bothered their brother Yeong-ho so much, a boy who went around doling out his own rough justice to the village children. As the eldest daughter, In-hye had been the one who took over from their exhausted mother and made a broth for her father to wash the liquor down, and so he’d always taken a certain care in his dealings with her. Only Yeong-hye, docile and naive, had been unable to deflect their father’s temper or put up any form of resistance. Instead, she had merely absorbed all her suffering inside her, deep into the marrow of her bones. Now, with the benefit of hindsight, In-hye could see that the role that she had adopted back then of the hard-working, self-sacrificing eldest daughter had been a sign not of maturity but of cowardice. It had been a survival tactic. (Han, 2015, pp.162-163)

Yeong-hye, being characterized as “docile and naïve” is victimized by the male characters in her life. During her childhood, she was beaten by the father, subjugated by Mr. Cheong, the husband, and lastly violated by her brother-in-law, ended up feeling traumatized in the patriarchal society. Based on Mr. Cheong’s descriptions of Yeong-hye’s father, he “received the Order of Military Merit for serving in Vietnam, and not only was his voice extremely loud, it was the voice of a man with strongly fixed ideas” (Han, 2015, p.37) and hence, he named him as the “patriarchal man”. He even forces his daughter to eat meat, and ended up cutting her own wrist. This is shown in the following excerpt:

I’d known of his incredibly violent temperament for some time, but it was the first time I’d directly witnessed him striking someone. “Mr. Cheong, Yeong-ho, the two of you come here.” I approached my wife hesitantly. He’d hit her so hard that the blood showed through the skin of her cheek. Her breathing wasragged, and it seemed that her composure had finally been shattered. “Take hold of Yeong-hye’s arms, both of you.” “What?” “If she eats it once, she’ll eat it again. It’s preposterous, everyone eats meat!” (Han, 2015, p.46)

In one of her internal monologues, one of the flashbacks, Yeong-hye recalled her bad experience bitten by a dog when she was a young kid. Despite being “wounded” physically and psychologically, she was forced by the parents to witness the killing of the dog that has bitten her. “The saying goes that for a wound caused by a dog bite to heal you have to eat the same dog. (Han, 2015, p.49) The sense of smell and taste of the dog meat terrified her and yet she has to eat it. So, being a woman in the traditional Korean patriarchal society, she was forced to abide to the patriarchal traditional rules. Lastly, she has to give up and says; “But I don’t care. I really don’t care.” (Han, 2015, p.50) The sense of powerlessness has led to the suppression of women in the patriarchal society.
In addition, Yeong-hye also describes the incident in her dream; “My bloody hands. My bloody mouth…Pushed that red raw mass into my mouth, felt it squish against my gums, the roof of my mouth, slick with crimson blood.” (Han, 2015, p.20) Yeong-hye also claims that “Something is stuck in my solar plexus…Because of meat. I ate too much meat. The lives of the animals I ate have lodged there. Blood and flesh…their lives still stick stubbornly to my insides.” (Han, 2015, p.56)

In another incident, Yeong-hye was perceived as odd when she was questioned by Mr. Cheong’s boss. She says, “Meat eating is a fundamental human instinct, which means vegetarianism goes against human nature, right? It just isn’t natural.” (Han, 2015, p.31) In the present time, she is also facing similar problem whereby she was forced to uphold the stereotypical role of being a housewife. She is not the conventional housewife who survive under the feet of her husband. Mr. Cheong’s colleague further indicates:

I’d hate to share a meal with someone who considers eating meat repulsive, just because that’s how they themselves personally feel…don’t you agree?” “Imagine you were snatching up a wriggling baby octopus with your chopsticks and chomping it to death—and the woman across from you glared like you were some kind of animal. That must be how it feels to sit down and eat with a vegetarian! (Han, 2015, pp.31-32)

Her ordinary and yet complex personality is incomprehensible by Mr. Cheong and the family members. Towards the end of the first section, Mr. Cheong believes that Yeong-hye has gone mad. Yeong-hye’s strange behaviours go downhill from thenceforth. Mr. Cheong witnesses the following incidents at the hospital:

My wife was sitting on a bench by the fountain. She had removed her hospital gown and placed it on her knees, leaving her gaunt collarbones, emaciated breasts and brown nipples completely exposed. The bandage had been unwound from her left wrist, and the blood that was leaking out seemed to be slowly licking at the sutured area. Sunbeams bathed her face and naked body. (Han, 2015, p.59)

In the second section of the novella entitled “Mongolian Mark”, Yeong-hye’s brother-in-law, who is an unnamed in the novella is obsessed with Yeong-hye’s Mongolian mark. The Mongolian mark is “just a thumb-sized thing, blue...In precisely that moment he was struck by the image of a blue flower on a woman’s buttocks, its petals opening outward” (Han, 2015, p.67). The symbol of the Mongolian mark arouses his sexual obsession towards Yeong-hye’s body. According to him, the Mongolian mark on Yeong-hye’s body invokes the image of “men and women having sex, their naked bodies completely covered with painted flowers”. (Han, 2015, p.67) Although “she [Yeong-hye] might well be called ugly in comparison with his wife [In-hye], but to him she radiated energy, like a tree that grows in the wilderness, denuded and solitary. (Han, 2015, p.71) Again, Yeong-hye being depicted as a spiritual being, who radiates vitality, instead of being deemed as a madwoman. She elaborates the recurring dreams in the following excerpt:
“Dreams? Ah, the face...that’s right, you said it was a face, no?” he said, feeling
drowsiness slowly creep through his body. “What kind of face? Whose face?” “It’s
different every time. Sometimes it feels very familiar, other times I’m sure I’ve never
seen it before. There are times when it’s all bloody…and times when it looks like the face
of a rotting corpse.” (Han, 2015, p.122)

The archetype of different faces ambiguously representing the dead animals as well as the
projection of her subjugated Self in the patriarchal society. The recurrent faces in her dreams
stirred up the intense emotions that triggers her state of unconscious. The recurring dream is a
form of repression; and her transformation served as a form of resistance against this self-
destructive vitality that lingers within her. Yeong-hye also makes a claim that Mr Cheong’s
body smells like meat. She says,“The meat smell. Your body smells of meat.” (Han, 2015, p.24)
In order to overcome her traumatic experiences, she has immersed into nature and she felt
transcend to go against patriarchal domination, and to redeem her sense of Self. Her association
to nature empowers her to go against the patriarchal subjugation.

3.2. Yeong-hye’s Personal Integration and Inner Awareness

According to Sydee and Beder (2001), “Certain paths of ecofeminist thought are almost wholly
spiritual, as theorists and activists explore the holistic value of reality and raise it to a sacred
realm” (p.1). They further affirmed that “the reconnection of women to nature as a source of
strength, power, and virtue. When Yeong-hye awoke one morning from her disturbing dreams,
she changed into a vegetarian. Her sudden decision is against by other characters (i.e. the
parents, the husband and her siblings). The random depictions of Yeong-hye’s dreams from her
memories highlights the disturbed and patriarchal relationships in her life. The feeling of being
empowered is “activated” once she realized that the drawing of flowers on her body has stopped
the dreams from troubling her at night. Charlene Spretnak claims that:

There are many moments in a woman’s life when she gains experiential knowledge,
in a powerful body/mind union, of the holistic truths of spirituality...females are
predisposed from a very early age to perceive the connectedness in life; for example, females
are more empathetic, and they remain more aware of the subtle, contextual “data” in
interpersonal contacts throughout adulthood” (p.35).

Being raised in a typical Asian family, patriarchal mentality dominates her entirely. In order to
release her suppressed Self, she found her inner peace in her brother-in-law’s artistic
expressions. Thus, the drawing of flowers on Yeong-hye’s body releases her inner strength to
overcome patriarchal subjugation. Yeong-hye says “I become a different person, a different
person rises up inside me, devours me.” (Han, 2015, p.40)

Yeong Hye’s brother-in-law painted huge clusters of flowers in yellow and white,
covering the skin from her collarbone to her breasts. If the flowers on her back were the
flowers of the night, these were the brilliant flowers of the day. Orange day lilies bloomed
on her concave stomach, and golden petals were scattered pell-mell over her thighs. A
thrilling energy seemed to flow out quietly from some unknowable place inside his body and
collect on the tip of his brush. He wanted only to draw it out for as long as possible. The
light from the tungsten lamp only illuminated as far as her throat, leaving her face in darkness; she looked as if she were sleeping, but when the tip of the brush grazed her skin her tremulous quivering told him that she was wide awake. Her calm acceptance of all these things made her seem to him something sacred. Whether human, animal or plant, she could not be called a “person,” but then she wasn’t exactly some feral creature either—more like a mysterious being with qualities of both. (Han, 2015, p.95)

The flower paintings on her body awaken her inner energy, further help her to transcend her sense of Self. Yeong-hye shows her sensitivity towards her surrounding especially to the natural environment throughout the novella. She feels a deep connection to the flowers (nature) that give her the strength and power to go against patriarchal domination. Thus she eventually disconnects herself from the human world slowly and immerses into the realm of nature by becoming a part of the ecosystem. She further states that “I didn’t want it to come off,” she said calmly, “so I haven’t washed my body. It’s stopping the dreams from coming. If it comes off later I hope you’ll paint it on again for me.” (Han, 2015, p.104) Yeong-hye’s state of awareness somehow conditions her to strip away the accumulated negativity in her life.

When everything else seems to fade away in her life, Yeong-hye finds comfort in becoming a plant/flower. More remarkably, she eventually stopped eating and support her life with water only. The excerpts below, taken from the other characters’ observation, Yeong-hye radiates her inner energy and awakens her soul.

She slowly turned her back on them and walked out onto the veranda. The chill air rushed into the apartment when she opened the sliding door…She thrust her glittering golden breasts over the veranda railing. Her legs were covered with scattered orange petals, and she spread them wide as though she wanted to make love to the sunlight, to the wind. (Han, 2015, p.125)

And yet he [Yeong-hye’s brother-in-law] kept on standing there as if rooted to the spot, as if this were the final moment of his life, staring fixedly at the blazing flower that was her body, that body which now glittered with images so much more intense than those he had filmed during the night. (Han, 2015, p.126)

The plant/flower imagery is very sacred to her. In-hye also witnesses the similar flow of renew vitality in Yeong-hye. Yeong-hye metamorphoses into a different person. She strengthens her “abnormality” and turn it into a positive aura.

In-hye also claims that “she refused to eat meat, and if she so much as set eyes on a side dish containing meat she would scream and try to run away. On sunny days she would press herself up against the window, unbutton her hospital gown and bare her breasts to the sun. (Han, 2015, p.144)

In-hye recalled how Yeong-hye had looked when she’d been standing on her hands. Had Yeong-hye mistaken the hospital’s concrete floor for the soft earth of the woods? Had her body metamorphosed into a sturdy trunk, with white roots sprouting from her hands.
and clutching the black soil? Had her legs stretched high up into the air while her arms extended all the way down to the earth’s very core, her back stretched taut to support this two-pronged spurt of growth? As the sun’s rays soaked down through Yeong-hye’s body, had the water that was saturating the soil been drawn up through her cells, eventually to bloom from her crotch as flowers? When Yeong-hye had balanced upside down and stretched out every fiber in her body, had these things been awakened in her soul? (Han, 2015, p.175)

The newly established sense of consciousness emerges as Yeong-hye redeemed her sense of Self through her immersion into nature. Yeong-hye’s breakthrough symbolises her detachment from patriarchal subjugation. The stillness of Yeong-hye’s inner Self allows her to experience the essence of life from a more transcendental perspective.

3.3 Women’s Madness or Spiritual Experiences?
According to James Lovelock (2000), “our automatic recognition system appears to have paralysed our capacity for conscious thought about a definition of life.” (p.4) Lovelock further questions the need to define what is “obvious and unmistakable in all its manifestations”, and in this context, women’s madness or spiritual experiences are exclusively personal for Yeong-hye. For Yeong-hye, to be associated with flowers and to be dissociated from eating meat or meat-related products would enable her to resist patriarchal dominance. Kheel further exclaims that:

If people are opposed to the domination of women, they may be more inclined to empathize with the plight of nonhuman animals once they understand the connections between the domination of women and of nonhuman animals. It is empathy, not abstract norms, that provides the motivation for vegetarianism in this invitational approach. Vegetarianism thus becomes part of a larger resistance to violence and domination. Renouncing meat becomes an affirmation of one’s connection to nonhuman animals and to the earth. (Kheel, 2004, p.334)

There is a fine line between madness and spirituality. Even In-hye, Yeong-hye’s sister questions the notion of sanity/insanity in the novella. She says:

All of a sudden, she realizes how blasé she’s become when it comes to the mentally ill. In fact, after all these visits to the hospital, sometimes it’s the tranquil streets filled with so-called “normal” people that end up seeming strange. (Han, 2015, pp.147-148)

Yeong-hye’s odd behaviours is viewed as a form of women’s madness, typically associated to eating disorder. However, according to Martin Kheel (2004), “vegetarianism is a form of response”, in Yeong-hye’s case, to go against patriarchy. The symbol of “meat in the novella is used to represent patriarchy. Caroline Brown (2008, p.94) claims that “to be deemed mad is to be placed in a position of penultimate alterity, slipping from the category of human to subhuman, from the locus of reason to that of irrational”. Brown emphasises the aspect of degradation from human to subhuman when an individual is identified as mad. In contrast to Brown’s conventional thinking, this present study discovers the definition of madness has changed. Yeong-hye’s identification with nature has unearthed another dimension of women’s madness. It is a very personal experience for Yeong-hye to find her sense of Self and redeem
her own identity. Hence, in Han Kang’s *The Vegetarian*, it appears as a form of liberation and the women’s emancipation from the patriarchal dominance.

Ecofeminist spiritualities provide a different perspective of women’s madness. The spiritual side of a woman needs to be taken into consideration in order to develop a more comprehensive understanding on women’s madness. The feeling of being empowered is actuated once Yeonghye immersed herself into nature. Spretnak (1991) claimed that:

> There are many moments in a woman’s life when she gains experiential knowledge, in a powerful body/mind union, of the holistic truths of spirituality…females are predisposed from a very early age to perceive the connectedness in life; for example, females are more empathetic, and they remain more aware of the subtle, contextual “data” in interpersonal contacts throughout adulthood. (p. 35)

Therefore, her transformation into a plant/flower release her from the patriarchal boundary and the “union of body/mind” enables her to feel empowered. The logic behind the culture/nature and body/mind dualisms should therefore be reconsidered as women’s immersion into nature can also be perceived as a form of spiritual identification. It is therefore “depended on a masculine perception of nature as a mother and bride whose primary function was to comfort, nurture, and provide for the well-being of the male.” (Merchant, 1990, p.9).

4. **CONCLUSION**

In Han Kang’s *The Vegetarian*, Yeong’hye’s assimilation into nature is perceived as a form of spiritual identification which enables her to search or her inner Self. In order to overpower her trauma, she has learned how to integrate herself into nature as well as to evoke her inner awareness. These two approaches; namely personal integration and inner awareness have transformed her inner self to be transcendence. Hence, these approaches served as the integrative and harmonizing functions that eventually transcend her inner spirituality into another level. In addition, the patriarchal concept of dualism needs to be re-considered as the identification of women to nature can be seen as a form of spiritual practice. On the contrary, her transformation and spiritual identification are viewed as a form of empowerment rather than a form of female malady.

5. **REFERENCES**


INVESTIGATING THE 10 TOURIST DESTINATIONS OF TRIPADVISOR TRAVELLER’S CHOICE AWARD 2017: A PRELIMINARY STUDY

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ABSTRACT

In tourism marketing study, the importance of tourist destination image has been universally acknowledged. Since image is closely related to subjective perception of individuals, which will lead to tourism behavior and tourist destination choice. This article investigates the image of 10 tourist destinations in term of its meaning as hedonic, utilitarian, novelty and social destination. Correlations analysis indicates that some of the tourist destinations might share the same image. The 10 tourist destinations were the top ten tourist destination based on TripAdvisor travellers’ choice award 2017. And the article concludes by discussing some recommendations for future research.

Keywords: tourist destination image; destination image; hedonic, utilitarian, social, novelty meanings;

1. INTRODUCTION

Tourism has been one of the important sectors in global economy, that able to move marketing activities into tourism marketing (Rahayu et al., 2017). That is the application of marketing concepts in the context of travel and tourism industry aiming towards ‘selling’ or marketing certain tourist destination like a product.

According to Ashworth & Voogd (1990) a place as a tourist destination can be referred as a product, because, logically, a tourist destination is the point of consumption that is tangible in the form of activities that consists of travel experiences, that is varied based on a tourist travel needs (Porter 1998; Goeldner & Ritchie, 2009). Thus, much can be learned from examining experience attributes for multiple tourist destinations, such what kind of tourist destinations fulfil what kind of needs.

Tourist destination is a place where experience, social psychological interaction, and behaviour of a tourist can be described, explained, and predicted. Therefore, researchers among disciplines are aware of the rich opportunities to studying consumer behaviour in the context of tourism marketing (Tuan 1974; Goffman 1963; Cheek & Burch 1976; Williams et al. 1992; Pearce 2001; Stokowski 2002; Snepenger et al. 2004, 2007).

However, the current state of tourist destination research is limited with most attention and focused on attractions (Snepenger et al., 2007). Based on the research design perspective, most of the research is dominated by specific location and only a few comparative analysis are some of the tourist destinations. That is why, Pearce (2001) recommended using comparative research approach to enhance the tourist experiences, occurring in different tourist destinations.
This study tries to answer Pearce (2001) recommendation by investigating the image of 10 tourist destinations in term of its meaning as hedonic, utilitarian, novelty, and social destination. In the previous literature, meaning of a tourist destination was utilized as predictor of experiences at some tourist destination (Snepenger et al., 2004). Therefore, this investigation demonstrated that experience provides useful insight for understanding the image of a tourist destination.

The Image of Tourist Destination

Image is a series of belief, ideas, and impression that one has to subjectively represent a picture of an object (Echtner & Ritchie, 1991; Milman & Pizam, 1995; Kotler, 1997; Hallmann & Breuer, 2010; Rahayu, 2017). In a tourism marketing study, the importance of destination image has been universally acknowledged. Since image is closely related to subjective perception of individuals (Lawson & Baud Bovy, 1977; Phelps, 1986; Lopes, 2011; Jalillvand et al, 2012), which will lead to tourism behavior and destination choice (Chon 1990, 1992; Echtner & Ritchie 1991; Stabler 1988; Telisman-Kosuta 1989; Gallarza et al, 2002).

The root of destination image theory is imagery. Psychologists have defined imagery as a way through which individual processes and retains multisensory information. Essentially, imagery is a holistic/gestalt method to represent information. This process or method is commonly referred to as mental picturing (Echtner & Ritchie, 2003; Rahayu, 2017).

Researchers in social discipline have found that tourism sites and tourist destinations are sources of identification and affiliation for people, which have special meaning in their life (Williams & Vaske, 2003; Hosany & Gilbert, 2010). That is why image of tourist destination can be distinguished based on its meaning (Snepenger et al., 2004). Therefore this article investigates the image of tourist destination in term of its meaning as hedonic, utilitarian, social, and novelty destination.

Hedonic Meaning

Hedonic meaning has been an important variable in tourism research (Unger & Kernan 1983; Goossens 2000; Crompton & McKay 1997). Hedonic meaning measured the degree of pleasure at each of tourist destination. The hedonic scale items were derived from previous research on hedonic and utilitarian consumer attitudes toward products (Batra & Ahtola 1991; Crowley, Spangenberg, & Hughes 1992; Snepenger et al., 2007). For each of the meanings questions, the tourist destination and the attribute were incorporated into each question items. The hedonic items were pleasant, dull (reverse coded), and enjoyable (Snepenger et al., 2007).

Utilitarian Meaning

Tourism scholars have not explicitly used utilitarian meaning in their research. However, utilitarian meaning usually used to monitor the functional nature of tourist destination. Similar to hedonic scale, utilitarian scale items were derived from previous research on hedonic and utilitarian consumer attitudes toward products (Batra and Ahtola 1991; Crowley, Spangenberg, and Hughes 1992). For each of the meanings questions, the tourist destination and the attribute were incorporated into each question items. The utilitarian items were useless (reverse code), valuable, and practical (Snepenger et al., 2007).

Novelty Meaning

The novelty meaning evaluated the unusual, non-everyday attributes of the tourist destination.
(i.e., exploration and novelty seeking). This scale was developed using Unger and Kernan’s (1983) subjective leisure scale and then used by Snepenger et al. (2007). The novelty items were: I can explore new things; offer nothing new (reverse coded), and out of the ordinary.

Social Meaning

The social variable has been recognized as a significant aspect of tourism behavior (Cheek, Field, & Burdge 1976; Cheek & Burch 1976; Crompton 1979; Snepenger et al., 2007). Social meaning refers to the degree of social interaction occurs among tourist at the tourist destination (e.g. Sack 1992; Snepenger et al., 2007). Social meaning measured the level of social interaction in every tourist destination. This scale was developed based on research by Cheek and Burch (1976) and Snepenger et al. (2007). The social attribute items were: good places to socialize with my family and friends, good places to talk to other people in the community, and good places to meet new people.

The Tourist Destinations:

This study investigates the top ten-tourist destination based on TripAdvisor travellers’ choice award 2017. TripAdvisor, Inc., is an American travel site company that provides hotels booking as well as travel-related content reviews. It also includes interactive travel forums. In 2017, TripAdvisor announce 10 tourist destinations based on travellers’ choice. The tourist destinations are Bali, London, Paris, Rome, New York, Crete, Barcelona, Siem Reap, Prague and Phuket. Each of the tourist destinations are describes beautifully, however there are no specific explanations why those ten tourist destinations were chosen as the very best of travel in the world. That is why this study tries to investigate each of those tourist destinations image in term of its meaning as hedonic, utilitarian, social, and novelty destination.

Research Question:

For each tourist destination in this study, four meanings were measured in an effort to understand the various experiences that occurred in 10 tourist destinations. Meanings include hedonic, which characterizes the amount of pleasure provided by a tourist destination; utilitarian, which captures the usefulness of a tourist destination; novelty, reflecting the uniqueness of a tourist destination; and social, which measures the human interaction that occurs in a tourist destination. Formally, research questions are as follows:

1. Which tourist destination had the most hedonic, utilitarian, novelty, and social meanings?
2. How are meanings correlated with each other across tourist destinations?
3. Which tourist destinations provide similar meaning?

2. SAMPLING AND STATISTICAL PROCEDURES

This sample of this study included 100 Prolific respondents. Prolific is a marketplace application connecting those doing research (academics, startups, data scientists, organizations) with target respondents (www.prolific.ac). Participants can earn rewards for participating in studies / tasks on Prolific. Prolific is the first scientific, highly scalable, ethical participant recruitment platform for researchers around the world. Researchers in 43 countries currently use it. Samples age is 18 to 59 years old. 69% female, 27% are those who travel abroad in the last month, 39% undergraduates’ degree (BA/BSc/Other), and most of the respondents (58%) are hold United Kingdom nationality.
Reliability analysis for the hedonic, utilitarian, novelty, and social meanings scales were measured for each of the 10 tourist destinations. The Cronbach’s alpha for each of meaning was 0.712 for hedonic scale; 0.612 for utilitarian scale; 0.599 for novelty scale; and 0.855 for social scale.

Several statistical procedures were selected to test the three research questions. Research questions 1 used the mean scores for the meanings of each tourist destination. Research question 2 used correlation analysis, and research question 3 used K-Mean cluster analysis.

![Figure 8. Profile Respondents (n=100)](image)

### Table 1. Validity and Reliability Analysis (n=100)

<table>
<thead>
<tr>
<th>Item measures (Sneipenger et al., 2007)</th>
<th>Validity</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Factor</td>
<td>Cronbach’s</td>
</tr>
<tr>
<td></td>
<td>Loading</td>
<td>Alpha</td>
</tr>
<tr>
<td>Hedonic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pleasant place</td>
<td>0.707</td>
<td>0.712</td>
</tr>
<tr>
<td>Dull place (reverse code)</td>
<td>0.500</td>
<td></td>
</tr>
<tr>
<td>Enjoyable place</td>
<td>0.772</td>
<td>(Reliable)</td>
</tr>
<tr>
<td>Utilitarian</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Useless place (reverse code)</td>
<td>0.562</td>
<td>0.612</td>
</tr>
<tr>
<td>Valuable place</td>
<td>0.710</td>
<td>(Reliable)</td>
</tr>
<tr>
<td>Practical place</td>
<td>0.500</td>
<td></td>
</tr>
<tr>
<td>Novelty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can explore new things</td>
<td>0.763</td>
<td>0.599</td>
</tr>
<tr>
<td>Offer nothing new (reverse coded)</td>
<td>0.400</td>
<td>(Reliable)</td>
</tr>
<tr>
<td>Out of the ordinary</td>
<td>0.599</td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good places to socialize with my family and friends</td>
<td>0.708</td>
<td>0.855</td>
</tr>
<tr>
<td>Good places to talk to other people in the community</td>
<td>0.826</td>
<td>(Reliable)</td>
</tr>
<tr>
<td>Good places to meet new people</td>
<td>0.791</td>
<td></td>
</tr>
</tbody>
</table>

* Factor loading for novelty item 2 is not valid, however the item is still used since the reliability test shows significant result.

### 3. FINDINGS

The first research questions focused on comparing the image of ten tourist destinations in term of its meaning as hedonic, utilitarian, novelty, and social destination. Before comparing the meanings, respondent were asked whether they familiar with the 10 tourist destinations, and all the respondents’ answer yes. The question is asked to ensure respondent’s answer is accordance with their knowledge of each tourist destinations in this study.
The meanings of tourist destinations are displayed in table 2. For each of the four meanings are measure using 5 Likert scale, ranged from strongly agree (2) to agree (1), neither agree nor disagree (0), disagree (−1), and strongly disagree (−2). Thus this study tries to classified tourist destination in positive, neutral, or negative meaning, in which zero represented neutral.

As seen in table 2, the 10-tourist destinations possessed positive hedonic meaning, with Rome, Phuket, and Bali exhibiting the highest scores. There is no neutral or negative tourist destination on hedonic meaning. However, Siem Reap was placed as the least hedonic tourist destination. As can also be seen in table 2, all of the tourist destinations exhibited positive utilitarian meanings. The most utilitarian tourist destinations were Rome along with London, and Paris. Similar with hedonic meaning, Siem Reap is also placed as the least utilitarian tourist destination. In novelty meaning, all of the tourist destinations are also possessed positive meaning with Bali, Rome and NYC exhibiting the highest scores. Meanwhile for social meaning, London, Crete, and Barcelona are in the tops three.

Table 2. Respondents Assesment of Meaning of Tourist Destinations (n=100)

<table>
<thead>
<tr>
<th>Hedonic Meaning</th>
<th>Utilitarian Meaning</th>
<th>Novelty Meaning</th>
<th>Social Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tourist Destinations</td>
<td>Mean Tourist Destinations</td>
<td>Mean Tourist Destinations</td>
<td>Mean Tourist Destinations</td>
</tr>
<tr>
<td>Rome</td>
<td>1.28</td>
<td>Rome</td>
<td>0.99</td>
</tr>
<tr>
<td>Phuket</td>
<td>1.24</td>
<td>London</td>
<td>0.97</td>
</tr>
<tr>
<td>Bali</td>
<td>1.19</td>
<td>Paris</td>
<td>0.96</td>
</tr>
<tr>
<td>Paris</td>
<td>1.18</td>
<td>Barcelona</td>
<td>0.88</td>
</tr>
<tr>
<td>Crete</td>
<td>1.14</td>
<td>Crete</td>
<td>0.83</td>
</tr>
<tr>
<td>Barcelona</td>
<td>1.12</td>
<td>NYC</td>
<td>0.83</td>
</tr>
<tr>
<td>NYC</td>
<td>1.02</td>
<td>Bali</td>
<td>0.81</td>
</tr>
<tr>
<td>Prague</td>
<td>0.91</td>
<td>Phuket</td>
<td>0.72</td>
</tr>
<tr>
<td>London</td>
<td>0.77</td>
<td>Prague</td>
<td>0.62</td>
</tr>
<tr>
<td>Siem Reap</td>
<td>0.76</td>
<td>Siem Reap</td>
<td>0.51</td>
</tr>
</tbody>
</table>

Note: Tourist destination rank-ordered by mean score

Table 3 displays the correlation matrix to answer research question 2. As seen in table 3, the correlation matrix across all 10-tourist destinations is correlated moderately for each of the meanings. For example, hedonic meaning correlated moderately with utilitarian (r=0.592), novelty (r=0.508), and social (r=0.443). The hedonic and utilitarian are the strongest correlation among other meanings. Novelty and social meanings produced the lowest correlation. For example social meaning has slight correlation with hedonic (r=0.443), as well as novelty correlated slightly with social (r=0.395).

Table 3. Correlations Between Meanings Across Tourist Destinations (n=100)

<table>
<thead>
<tr>
<th>Meanings</th>
<th>Hedonic</th>
<th>Utilitarian</th>
<th>Novelty</th>
<th>Social</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hedonic</td>
<td>--</td>
<td>.592**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utilitarian</td>
<td></td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Novelty</td>
<td>.508**</td>
<td>.459**</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>.443**</td>
<td>.446**</td>
<td>.395**</td>
<td>--</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
Research question 3 examined tourist destination based on its meaning, to investigate which tourist destinations provide similar meaning. K-mean cluster analysis was used to assess all ten-tourist destinations, and four cluster solutions is reported because it was stable when meanings was used to describe experience at the tourist destinations. The tourist destinations are labeled hedonic experience, utilitarian experience, novelty experience, and social experience. It is because meaning of a tourist destination was utilized as predictor of experiences at some tourist destination (Snepenger et al., 2004).

As seen in table 4, there is tourist destination share the same experience and there is not. For example Rome has share the same hedonic, utilitarian, and social experience, even tough Rome is the best tourist destinations to meet utilitarian experience. Also, Prague has share the same novelty and social experience, even tough it is the best tourist destinations to meet social experience. Bali, on the contrary doesn't share the same meaning with any tourist destination, it’s only best to meets the hedonic experience, as well as Siem Reap only best to meet novelty meaning.

Table.4. Cluster Solution for Tourist Destination Using Meanings (n=100)

<table>
<thead>
<tr>
<th>Hedonic Experience</th>
<th>Utilitarian Experience</th>
<th>Novelty Experience</th>
<th>Social Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bali 18,0%</td>
<td>Rome 12,1%</td>
<td>Siem Reap 19,0%</td>
<td>Prague 13,5%</td>
</tr>
<tr>
<td>Rome 12,0%</td>
<td>London 11,7%</td>
<td>London 14,5%</td>
<td>Barcelona 11,3%</td>
</tr>
<tr>
<td>Phuket 12,0%</td>
<td>Phuket 11,7%</td>
<td>Prague 12,2%</td>
<td>NYC 11,9%</td>
</tr>
<tr>
<td>Paris 12,0%</td>
<td>Crete 11,3%</td>
<td>Phuket 9,5%</td>
<td>Rome 10,3%</td>
</tr>
<tr>
<td></td>
<td>Paris 10,5%</td>
<td></td>
<td>Crete 10,3%</td>
</tr>
</tbody>
</table>

Note: Tourist destination rank order by number of cases. Table 4 shows only tourist destination that meet 50 percent of number case per cluster.

4. DISCUSSION

This article investigates the image of tourist destinations in term of its meanings. There are findings drawn for each of the research questions. The finding of the first research question suggests that each tourist destination possess divergent hedonic, utilitarian, novelty, and social meanings and experience. That is why correlation results significant in the second research question. It means that basically tourist destinations are sharing the same meaning. However, the finding of the third research question shows that not every tourist destination share the same meaning, there is Bali and Siem Reap that suitable only to one meaning.

Bali was identified exhibiting the highest score of novelty meaning and the third highest score for hedonic meaning. It means that Bali is able to provide both uniqueness and pleasure of a tourist destination. However, above all meaning, Bali was best to meet the one and only hedonic experience. Hedonic meaning measured the degree of pleasure associated at each of tourist destination, therefore respondents consider Bali more likely as tourist destination that is able to provide pleasant, exciting, and enjoyable experience.

On the other hand, Rome was identified exhibiting the highest score for hedonic and utilitarian meaning. It means that Rome is able to provide both pleasure and usefulness of a tourist destination. However, above all meaning, Rome was best to meet the utilitarian experience, which provide functional nature of a tourist destination. Therefore the respondent considers Rome more likely as tourist destination that is able to provide a useful, valuable, and practical experience. This finding may be due to hedonic and utilitarian is moderately correlated with
each other, or maybe because Rome is the city built on history that is filled with life, beauty, and charm. So the value of Rome can also enjoyable.

As describe in the previous paragraph, Bali was identified exhibiting the highest score of novelty meaning, however, Siem Reap was the best to meet the novelty experience. Novelty meaning shows the uniqueness of a tourist destination, therefore the respondents consider Siem Reap more likely as tourist destination that is able to provide experience in exploring new things that is out of the ordinary.

For social meaning, London, Crete, and Barcelona posses the highest score. It means that those destinations are able to provide human interaction. However, the one that best to meet social experience is Prague. Social meaning measured the level of social interaction at each of the tourist destination. Therefore, respondent considers Prague more likely as tourist destination to socialize with family and friends, or to talk to other people in the community, and to meet new people, rather than London.

5. CONCLUSION

Based on the fore mentioned findings, this study concludes that Bali can be associated as hedonic destination image, for its ability to provide pleasant, exciting, and enjoyable experience. Meanwhile Rome is more likely associated as Utilitarian destination image, for its ability to provide useful, valuable, and practical experience. This study also conclude that although Bali is exhibiting the highest novelty meaning, but the tourist destination that is suitable to associated as novelty destination image is Siem Reap, due to its ability to provide experience in exploring new things that is out of the ordinary. As well as London that is exhibiting the highest social meaning, but the tourist destination that is suitable to associate as social destination image is Prague.

However, this study is a preliminary study. There are several fruitful areas for additional study of tourism marketing. For instance, it might be useful to replicate this study to investigate specifics tourist destinations in specific countries. It may also be beneficial to examine how a destination image in term of its meaning can affect the attitude toward tourist destination. In addition, exploring how the society stereotype of a tourist destination may also be useful, considering that naturally society and tourist destination comes in a package.

6. ACKNOWLEDGEMENT

Herewith, we wish to thank the faculty members, and all colleagues who helped to shape the ideas presented in this manuscript. We wish to also thank editors and reviewers for the precious job done during the review of our manuscript.

7. REFERENCES


SHAPING A BETTER WORLD THROUGH POVERTY ERADICATION: THE ROLE OF ISLAMIC FINANCE

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ABSTRACT

Islamic finance has registered continuous and tremendous growth over the years thereby becoming a prominent financial system because of its strong resilience to financial and economic shocks. Its positive role towards poverty alleviation by employing ethical and sound microfinancing products has greatly helped to improve the lives of so many less fortunate individuals around the world thereby shaping the future of the entire world.

Among the salient features of Islamic finance is its ability to support entrepreneurship both at a macro and micro level, strengthening public and private banking services and aiding infrastructural development in developing and developed economies. This has been evidenced during the challenging period of the economic and financial crisis that affected many countries.

Its ability to get into contact with the real economy in a more ethical and prudent way makes it a unique form of finance. Islamic microfinance as a branch within the Islamic financial system has greatly helped in improving the lives of the poorest of the poor through providing startup capital in form of small and soft loans, micro insurance services, money transfers and this has greatly helped in poverty alleviation more especially in developing economies of the world.

The past researches have found out that Islamic finance through micro financing has greatly played a fundamental role in shaping and betterment of the socio-economic lives of many individuals more especially the poor in economies where it has been practised. This has been so because of the various products of Islamic microfinance such as zero-based interest lending, charity-based products like zakah and sadaqah which are given to the less fortunate individuals in the society. On the contrary, the conventional financial system has been found to have failed in meeting the challenges of poverty that are affecting many people in the world thereby failing to shape the world to the expectations of people.

This paper thus aims at investigating the extent to which Islamic microfinance as a subject of Islamic finance can help in shaping the future of the world by providing solution to the poverty problems faced by many people through suggesting possible mechanisms. A conceptual study will be carried out by use of available literature on Islamic finance, its products and other
related research studies by academicians and practitioners in the industry more so those engaged in poverty alleviation with a view of addressing the research problem.

**KEY WORDS:** Islamic microfinance, Poverty, Sadaqah, Zakah, Microfinance Institutions (MFIs), Poverty alleviation.

**INTRODUCTION**

Although still perceived to be a new phenomenon of the modern day finance, Islamic finance is one of the aspects embedded within the objectives of Islamic law (Maqasid al-Shariah) because of its attributes that are in line within the tenets and virtues of Islam revealed more than 1438 years ago. It encompasses the economic and social aspects of human life which help in addressing the daily problems of people such as equitable allocation of resources, poverty eradication, employment and the social aspects of life. Its uniqueness in operation, management and principles that are in line with the Islamic teachings make it a distinct form of finance that is very different from the conventional finance.

A lot of efforts have been undertaken to strengthen and improve the Islamic commercial system through numerous approaches, innovations and product development. However, the Islamic social aspect has been greatly disbarred from these developments. Though the biggest percentage of the population in developing countries are poor especially in Muslim dominated nations, a lot of efforts have been driven towards improving the commercial sector that benefits those with some income neglecting the social sector that has the majority population who are living in extreme dangers of poverty, starvation and hunger.

According to ISRA (2009) and Ismail (2014), though the Islamic commercial system has had tremendous contribution to economic development in many countries, the deliberate denial of financial institutions to include the Islamic social finance aspects in their products and programs has greatly hindered development and contributed to poverty in developing economies. Even the existing conventional institutions have put their emphasis on commercialization so as to meet their objectives of profit maximization abandoning the social aspects of people.

None the less, Islamic finance as a system is inclined on the provisions of promoting economic empowerment, social justice and improved welfare of all people. This will help in developing the physical, human and societal aspects of mankind (Abbas and Askari, 2010). This is important because Islam advocates for a system where all individuals have equal and fair rights irrespective of their status, religious inclinations, and social backgrounds which will help them to contribute to the development of themselves, families and the society as a whole (Iqbal, 2013).

Both the philosophical and theoretical underpinnings of Islamic finance put more emphasis on the socio-economic development of an individual, family and the community as a whole with an aim of achieving the Maqasid Al-Shariah. Therefore, unlike the conventional finance system which puts more importance on asset generation and economic empowerment only, Islamic finance integrates both commercial and social finance so as to uplift the well-being of individuals and society.
Despite the fact that many strategies have been undertaken by the conventional financial institutions to alleviate poverty in developing nations, less effort and capital has been injected into the social ventures of the poor. This has called for a study to investigate how Islamic social finance can create a sustainable approach to alleviating this poverty problem in developing economies.

LITERATURE REVIEW

Understanding of Social Finance

The term “Social finance” has been understood and defined differently by different researchers. Some refer to it as social entrepreneurship, social capital, microfinance, socially responsible investing and others corporate social responsibility. Social finance refers to the deployment of financial resources primarily for social and environmental returns, as well as in some cases, a financial return (Moore, & Nicholls, 2012).

According to the Canadian government, Social finance is a technique employed in massing of private capital for the benefit of the society as a whole. It helps in creating avenues for potential investors to inject funds into developmental projects that create opportunities to the society and assist local community organisations to acquire capital needed for development.

A lot of efforts have been undertaken by governments and development partners to end the social, economic and political problems facing the world such as hunger, poverty, malnutrition, diseases, environmental degradation, ecological destruction, unemployment and so on. However, the conventional approach towards solving these problems have completely failed and this can be evidenced by the increasing rates of absolute poverty in developing countries coupled with hunger and diseases.

Nusrate.M and Osman.M (2016) postulate that the emergence of social finance was a result of the need to establish businesses that could help in solving social problems and the existence of rampant poverty among developing nations coupled with other social problems like injustice, inequality, diseases led to more emphasis on the aspects of developing more sound social enterprises.

Emergence of Islamic Social finance

Islam as a religion has got a holistic approach that embeds the socio-economic, political and spiritual aspects of the day to day activities of mankind. It looks at the universality of human beings irrespective of colour, race, status or tribal setting with a view of having a society that is just and equitable in all aspects.

The concentration of wealth in the hands of very few individuals and creation of a society of self-enrichment against the majority members of the society is strongly forbidden in Islam. Instead Islam advocates for social justice, equitable allocation of resources, unity and brotherhood among members of the society (Shahzad, 2012).

Despite the fact that both the haves and have-nots live concurrently in the community as a whole, the responsibility lies on the haves to help the have-nots so as to have a well to do society that is unified. In fact in one of the Prophet’s sayings, it is reported that the Prophet S.A.W said:
“The believers in their affection, mercy and sympathy to each other, are like the body, if one of its organs suffer and complains, the entire body responds with insomnia and fever.”
(Sahih Muslim)

Indeed Allah commands us to establish justice and equity in all aspects of our life and to ensure that we promote justice and good conduct not only in our individual life but also in the socio-economic aspects of the entire community. Allah S.W.T says:

"(إِنَّ اللَّهَ يَأْمُرُ بِالْعَدْلِ وَالِْْحْسَانِ وَإِيتَاءِ ذِي الْقُرْبَى وَيَنْهَى عَنِ الْفَحْشَاءِ وَالْمُنْكَرِ وَالْبَغْيِ يَعِظُّكُمْ لَعَلَّكُمْ تَذَكَّرُونَ)" (90)

"Allah commands justice, the doing of good and liberality to kith & kin and He forbids all shameful deeds and injustice and rebellion"...(Surat An Nahl 16:90).

The emergence of Islamic social finance in the 20th century was as a result of the need to create remedies to the social problems that were affecting the social welfare of people more especially in developing countries as a result of the failure of conventional institutions to solve these problems such as poverty, unemployment, environmental degradation, injustice, and hunger among others.

In the 1970s, Professor Muhammad Yunus proposed a business strategy that sees businesses incorporating the social welfare aspect in their activities by providing funds to small business enterprises to open up micro-businesses without expecting any returns in form of profits or dividends and in the long run would pullout their capital after the businesses had stabilized (Yunus and Weber, 2009).

Islamic social finance advocates for interest free business strategies where individuals share the risks and profits of their activities without oppressing one another. It also encourages supporting one another especially by those who are well off in form of social responsibility so as to improve the welfare of others so as to strengthen brotherhood and unity. Activities that promote social welfare are strongly encouraged by Islam while it discourages charging of interest and self-enrichment through excessive profit maximization.

Poverty is perceived to be one of the world’s problems that governments and other international organisations have put their attention to. The ever increasing poverty rates in developing countries and especially in Muslim populated nations has created unrest and dangers of social disorders accompanied with other vices such as diseases, malnutrition, food shortages, lack of shelter and so on. It is worth noting that Islam discourages people to over dwell in poverty without finding means of eradicating it. Though understood to be a fact of life, human beings are encouraged to work hard to reduce the burdens of poverty while the state is also responsible for providing for its citizenry and more importantly in relation to the wellbeing (Maslahah) of the poor.

In fact the responsibility of the state is drawn from the Prophet S.A.W who established the Baitul Maal where believers could offer Sadaqah, Zakah, Waqf and Qard Hasan to help in settling social problems of the time. Even taxes levied on agricultural land (Kharaj) and on non-Muslims in the state (Jizyah) were all used to uplift the social welfare of people in the state. The poorest of the poor and those who got problems were given assistance out of the Baitul Maal and were encouraged to work hard to uplift their social wellbeing.
It is thus worth noting that Islam has put a strong emphasis on social wellbeing of people and encouraged Muslims to seek for Allah’s bounties in proper means that don’t go against their religious teachings. The prophet dissuaded Muslims against begging and instead encouraged them to work while asking for Allah’s blessings. He also encouraged the well off's to help those unprivileged so as to live in harmony and togetherness.

**Islamic social finance models or approaches**

Islamic finance has a laid down foundation of models, approaches and products that are used in meeting the challenges facing the world today. Both commercial and social finance are closely interconnected with one another so as to fulfill the intended objectives of Maqasid al shariah. Some of the social finance institutions used in Islamic finance include Islamic microfinance institutions, waqf and zakah institutions, sadaqah and Qard hasan models among others.

These not only help to alleviate poverty among the poor but also greatly help in empowering people financially through extending micro credit services, charity, business growth, education and social welfare development.

Islam as a religion establishes quite a number of sources from which social benefits are derived and reach the poorest of the poor and the needy among which they include Zakah (compulsory Almsgiving), Sadaqah, Waqf (religious philanthropic endowment) and Qard ul-hasan (benevolent loan). These greatly help in minimizing the income gap between the haves and the have-nots and also mitigate the dangers of poverty. Indeed scholars such as Al-Gari (2004), Sadeq (2002) and Khan (2003) postulate that establishing systems that are philanthropic greatly help in transmitting assistance to the poor which should be a sole responsibility of government that helps it in alleviating poverty among its citizenry.

Because of the adverse effects it has on the socio lives of people, poverty is strongly condemned in Islam and means are provided to ensure that people are not left entangled in absolute poverty. This explains why Islamic finance as a system has adopted an integrated commercial and social system that enables access to finance by the poor through voluntary and involuntary assistance of the well offs which is intended to improve the socio-economic wellbeing of people.

**Islamic Charity-Based approach to poverty alleviation**

This approach involves extending financial assistance to the poor by both the wealthier individuals at a local level and by international charitable organisations. This is normally a non-profit approach where the funders expect only divine rewards from the Almighty Allah without a return in form of payback from the recipients. The funds extended to the poor are in form of startup capital to establish small businesses which can produce some little income to sustain themselves and their families. Through this approach, the poorest of the poor get access to basic social amenities required in uplifting their living standards and socio-economic conditions.

Both Zakah and Sadaqah are the institutions used in extending funds to the less privileged individuals under this approach. These are religious philanthropies established by Islam to enable people come out of poverty and reduce inequalities of income among the population. While Zakah is a compulsory contribution from all wealthier Muslims out of their annual income threshold, Sadaqah is a voluntary establishment through which Muslims are obliged to assist one another especially the poor and destitutes with anticipation of divinely rewards. The
collections received from Zakah and Sadaqah are put into a fund where financial assistance is extended to the poor in form of capital for small enterprises and or socio-economic needs like health, education, housing and so on.

Waqf is the other charity-based approach to poverty alleviation under the Islamic perspective. This involves provision of physical assets and other endowments for purposes of helping the community in uplifting the living standards of people with strict observance of their perpetuity and proper management. These may be in form of commercial buildings, land, and philanthropic literature. The proceeds generated from these assets are extended to the poor and destitutes so as to improve their living conditions through technical assistance and capacity building so as to ensure that they become self-reliant and economically empowered.

It should be noted that there are various forms of awqaf in Islam such as cash waqf, property waqf in form of land, buildings, machinery and so on. It might also be project-specific (donated for a specific project such as land for educational purposes) or asset-specific (when donated specifically to fund a particular asset like a borehole, heart or cancer machine in a hospital). However, they should be used purposely for religious or charitable causes that are aimed at assisting the poor or less fortunate socially and empower them economically.

The best example of Islamic social financing through Waqf is derived from the famous hadeeth reported by Abdullah bin Umar R.A. He narrates that;

“Umar bun Khatwab R.A acquired a land at Khaibar. He came to Allah’s Apostle (may peace be upon him) and sought his advice in regard to it. He said: Allah's Messenger, I have acquired land in Khaibar. I have never acquired property more valuable for me than this, so what do you command me to do with it? Thereupon he (Allah's Apostle) said: If you like, you may keep the corpus intact and give its produce as Sadaqa. So Umar gave it as Sadaqa declaring that property must not be sold or inherited or given away as gift. And Umar devoted it to the poor, to the nearest kin, and to the emancipation of slaves, aired in the way of Allah and guests. There is no sin for one, who administers it if he eats something from it in a reasonable manner or if he feeds his friends and does not hoard up goods.” (Sahih Muslim)

According to Rahman and Dean (2013), the institutions of zakah and waqf are of paramount importance in building the capacity and empowerment of the less fortunate members of the society through enhancing their skills in income generation and thus become reliable customers of the microfinance industry. Through waqf, various training centers and capacity development units can be constructed and some of the funds can be used in paying the trainers so as to make the model for sustainable.

**Islamic microfinance model to poverty alleviation**

The existence of poverty is not new in the life of man because it dates back even in the Pre-Islamic and Post-Islamic era though it has escalated with the increase and growth in population globally. This explains why the entire world organisations and governments have put more attention and emphasis to it and has become priority number one on their agenda. Because of the failure of most strategies and techniques applied in poverty alleviation, the subject of Islamic microfinance has gained momentum and is dominating the financial world as an ethical approach for alleviating poverty, especially in developing countries around the world. Since the concepts and practices of Islamic Microfinance stick firmly to the principles of Islamic finance
which qualifies it to be an ethical form of investment, various economists argue that this financing strategy is best suitable in making people independent, respectable and with good entrepreneurial capabilities.

Research has revealed that the application of the ethical (Islamic) modes of financing into the microfinance framework has proved to be a better strategy and everlasting solution in alleviating the poverty problem. The poorest of the poor and those financially handicapped in different countries where the practice of Islamic microfinance has been applied have successfully come out of the poverty scourge which has also generated more employment opportunities and improved their wellbeing for example in countries like Bangladesh and Indonesia.

Unlike the conventional microfinance system which requires borrowers to present collateral security, more than one guarantors, high interest rates etc. the Islamic microfinance strategy is mainly based on trust (Amanah), hard work, ihsan (perfection), adl (justice) among others from the borrower and or group members (under group lending). The absence of the above factors clearly explains why conventional micro financing has failed to meet the challenge of poverty reduction though much effort has been done. Therefore, the key features in the IMF system are very prudent in job creation, family stability and uplifting the living standards of the poor. This is all through a system of lending out micro-loans to the poor borrowers and small scale entrepreneurs. These funds are aimed at creating new business ventures and expounding on the already existing ones with very friendly terms of repayment and financing. (Abdul Rahman, 2010).

This approach involves disseminating funds to the recipients is in two categories, one with a single borrower / entrepreneur and the other to a group of borrowers. This is in relation to the particular needs of the individual or group and it will also determine the size of fund to get. However, research has shown that funding individuals is highly riskier than funding particular groups. In fact scholars such as De Aghion and Murdoch (2005) argue that the risk in group lending is lower than in other schemes because of the integrity and ethics instilled amongst members within a particular group. This forces them to handle the borrowed funds in a more prudent and ethical manner to avoid causing problems to the entire group.

According to Obaidullah, M. (2008), sensitization of all members within the group is conducted with an aim of creating awareness amongst them in handling the borrowed funds with every group member guaranteeing each other. This helps in meeting the loan obligations and having proper savings which in return minimizes the level of default risks, costs of monitoring and supervision.

In contrast to the mainstream banking system which employs limited sources of funding, the Islamic Microfinance system has got a wider range of sources to fund their activities such as Voluntary charity (sadaqah), almsgiving (zakah), endowment property (waqf) and voluntary disbursements (Infaq). These form the major sources of funding for Islamic microfinance institutions. (Ahmed.H, 2002)

However, the above and other major Islamic financing modes such as Mudharabah, Musharaka, Murabaha, wadiyah, Qard al hasan, Salam, Istisna, ijarah and others also form part of the sources of funding for the Islamic microfinance institutions. (Md Saad.N, 2012). Majority of the Islamic microfinance institutions apply mainly the Murabaha and Qard al hasan modes of financing
with very few institutions applying Salam and other equity modes of financing. (El-Zoghbi & Tarazi, 2013).

Most Shariah scholars and experts in Islamic jurisprudence are in favor of the equity modes of financing i.e. Musharaka and Mudharabah financing because of their compliance with the rules governing Shariah. And many are against the Murabaha form of financing with a view that it’s quite similar and close to the conventional loan system which raises a lot of issues with it. The above two, Musharaka and Mudharabah are partnerships that involve the sharing of profits and risks by both parties i.e. the borrowers and the financing agency with responsibility on each party of ensuring that the partnership does not face mishaps.

**Ruma Zakah Yogyakarta in Indonesia as a case study in Developing countries.**

Since the 1970s, a big number of Indonesians estimated to be above 50 percent of the entire population have been living in extreme poverty and under development. They lacked access to financial services, good accommodation, health, better education and were prone to diseases and malnutrition. Through a group of enthusiastic individuals who developed an idea of carrying out social transformation, an organisation called Dompet Sosial Ummul Quro (DSUQ) was founded in 1998 which later in 2004 was renamed Ruma Zakah Indonesia as a national zakah collection institution. The idea was to use zakah funds as a method of transforming the socio-economic lives of the poor Indonesians and empowering them economically through establishing small business ventures.

An economic empowerment initiative named Jaring Pengembang Ekonomi Rakyat (JPER) was started in May 2004 with an adoption of a zakah approach. This approach employed two different paradigms with one involving disseminating the zakah proceeds to its rightful recipients such as the faqil and masaqeen, while the other involved establishing group investment projects among the peasants who were given start-up capital so as to empower them financially. Zakah funds were provided to these peasants in form of Qard ul hasan (benevolent or interest free loans) to engage in poultry farming. It established training and capacity building programs on how to manage micro businesses for the poor peasants and encouraged youths to resettle back in the rural areas and establish livelihood projects which would empower them.

On the social aspect, health services were initiated like mobile clinics, free ambulance services, developed village communities through social responsibility and provided education to the poor. All this was done through employing zakah funds that were collected from the different donors and managed in a way that would promote economic empowerment of the poor and in the long run alleviate poverty among the poor.

**Conclusion**

It should be noted that the Islamic social system is intended to bring on board the poor to achieve the necessary social benefits just like other well-off Muslims. Islam strongly encourages unity and brotherhood through assisting one another both socially and economically. In fact it is narrated that the Prophet Mohammad (PBUH) forbade a rich Muslim to sleep when his poor Muslim neighbor was hungry and in pain. It is through the compulsory payment by the rich and the extension of sadaqah, waqf and hadiah to the poor that can help to improve their socio-economic well-being.
The Almighty Allah ordained the payment of zakah as a third pillar of Islam and made it mandatory on to the rich individuals because of its endless uses especially in helping to alleviate poverty among the poor in the community and above all reduce the social burdens of the poor. The other institutions of philanthropy such as sadaqah, waqf and Qard ul hasan can be applied in a way that funds are used for establishing socio-economic infrastructure such as roads, hospitals, community schools which benefit the whole society.

Empirically it has been observed that in developing countries where Islamic social finance approaches that involve an integrated system of zakah, waqf, sadaqah and Islamic microfinance have greatly helped in overcoming the burdens of poverty and empowerment of the poor. In countries such as Indonesia and Sudan, the institutions of zakah and waqf have contributed a great deal not only in reducing poverty but also in empowering women, youths, generating employment opportunities and fighting domestic crime.

Establishment of social financial institutions such as Microfinance institutions (MFIs), Savings, Credit and Co-operative Societies (SACCOs) and other charitable organisations that employ the Islamic aspects of zakah, sadaqah, waqf and other Islamic finance products such as Qard ul hasan, Musharaka, mudaraba can play a great deal in improving financial inclusion of the poor in the developing economies and thus enable them to get access to financial services that will facilitate setting up of small business ventures and in the long run eliminate poverty and achieve a well-established socially empowered and developed society.

It should be recalled that the Islamic finance industry has registered tremendous growth and success since the early 1990s with many countries that adopted the system becoming more resilient financially especially during the previous economic and financial crises that affected the world. However, with the growth of Islamic commercial finance through prudent financial contracts among financial institutions, the Islamic social finance aspect is still lagging behind. This is contrary to the essence behind the objectives of Islamic law (Maqasid shariah) which encourages Muslims to strive not only to achieve profit but also to ensure that individuals live happily in a well socio-economic and politically stable environment.

Islamic financial institutions such as banks and other microfinance institutions should find means of integrating both the commercial and social aspects of finance within their financial services so as to help in overcoming poverty through assisting the poor and destitutes and thus put a noble hand in eliminating social problems through socially responsible investments. These can be applied with other forms of financing that is in line with the teachings of Islam so as to make the dealings Shariah-compliant.

**Recommendations**

I highly recommend that an integrated system where the various institutions such as zakah, sadaqah, waqf and other modes of financing like Musharaka, mudaraba, Qard ul hasan and others can be incorporated into the commercial transactions and social systems of the Islamic financial institutions (IFIs). This can work very well especially in developing countries where microfinance institutions lack funding from mainstream banks yet there are individual charitable organisations and individuals who can provide funds to these MFIs so as to assist the poor.
It is also recommended that zakah collection institutions such as House of Zakah and Waqf Uganda (HZWU) should not only aim at providing assistance to zakah recipients but should engage in capacity building and empowerment programs within their domain of work with an ultimate goal of alleviating poverty and solving socio-economic problems of the less fortunate in developing countries. It is assumed that this approach will be sustainable especially with funding from government and other donor organisations such as IDB and World Bank.

This system of Islamic social finance when well facilitated and professionally handled will greatly help in ending extreme poverty by ensuring empowerment and self-sustenance of the poor through income generation as a result of micro-business savings of the poor, income redistribution and ending income inequalities through zakah payments and social well-being of all through establishing socio-economic infrastructure using proceeds from awqaf properties and sadaqah.

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Was there an earlier Neolithic in Indonesia before the ‘Out-of-Taiwan’ Neolithic? What was the human genetic impact of Out-of-Taiwan? Were there earlier domestications? Where did they come from?

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ABSTRACT

Narratives, perceptions and assumptions of Island Southeast Asian (ISEA) prehistory have, since 1975, been predicated on an archaeo-linguistic paradigm, which argues that Taiwanese farmers speaking Austronesian languages, carrying rice and red-slipped pottery arrived in Indonesia, via the Philippines around 4ka and largely replaced pre-existing populations of hunter-gatherers. While there is now some clear directional uniparental genetic support for such a Neolithic migration, the ancestral impact on Indonesian populations was only ~20% (mainly in Sulawesi), and there was an earlier ceramic migration (Neolithic 1) ~5.2ka, from Mainland-SEA (MSEA) carrying cord-marked pottery and rice via the Malay Peninsula accounting for 10% of modern ISEA ancestry, mainly in the Greater Sunda region. Furthermore, the novelty of Late Holocene pottery in ISEA cannot support the assumption that these Late Holocene ‘ceramic-invaders’ met only wandering hunter-gatherers in Indonesia, who had none of the maritime skills, or plant, tree and animal domesticates, for which Indonesia is famous. On the contrary, taking the three lightest animal domestications (dogs, pigs and chickens), for which there is both archaeological and genetic evidence, Asian dogs arrived via MSEA and the Malay peninsula before the Mid-Holocene, reaching New Guinea and Australia by 5ka, carrying the same canine mitochondrial-DNA (mtDNA) marker, which is not found in Taiwan or the Philippines. Similarly, ancestral mtDNA of Pacific dogs is only found in MSEA, Bali, Kalimantan and New Guinea, taking a similar southerly genetic trail from MSEA, through the Sundas. Neither of these early domesticates’ mtDNA trail-markers are found in the Philippines or Taiwan. Indonesia translocation (effectively domestication) of exotic pigs (Sus celebensis) from Sulawesi to Flores and Maluku dates up-to ~7ka. Founding Pacific chickens have no Taiwanese ancestors. Finally, the New Guinea Neolithic started by 10ka, with significant spread of domesticated domesticated bananas, sugar cane and root crops to Indonesia.

Keywords: Archaeology; domestication; genetics; migration; prehistory.

1. INTRODUCTION

The ‘Out-of-Taiwan’ theory of a Late Holocene Neolithic invasion of Island Southeast Asia from Taiwan has a long, controversial history in publications, going back to its original incarnation as a dispersal of ‘Austronesian horticulturalists’ (Shutler and Marck, 1975). Peter Bellwood, the key advocate of the Island Southeast Asian Neolithic expansion concept, has published extensively on it, and sees the model as a demic invasion of Indonesia and expansion by Taiwanese rice farmers, around 4,000 years ago, characterised by Austronesian language spread, rice growing and the spread of red slipped pottery. One crucial element of this invasion
theory was the assumption that at the time of the invasion, Indonesia was occupied only by hunter gatherers, not agriculturalists or horticulturalists, and that this gave the invaders an advantage, which could allow partial to complete replacement of indigenes. Diamond and Bellwood wrote an influential review in *Science* (2003) citing worldwide examples, expanding their view, of such Neolithic expansions, articulating their opinion early on in the article that the Austronesian Out-of-Taiwan replacement model was still one of the two best exemplars although, for replacement, they chose the colonisation of “previously uninhabited Polynesia and Micronesia” as their Austronesian example, rather than ISEA:

The simplest form of the basic hypothesis – that prehistoric agriculture dispersed hand-in-hand with human genes and languages – is that farmers and their culture replace neighbouring hunter-gatherers and the latter’s culture. This hypothesis would be supported if all five independent types of evidence coincided in attesting the replacement of local hunter-gatherers by expanding farmers bearing their own archaeologically visible culture, domesticates, skeletal types, genes, and languages, and if all those indicators were traceable back to the farmers’ homeland of origin. Our two clearest examples of such concordance of evidence are the colonizations of previously uninhabited Polynesia and Micronesia by Neolithic populations speaking Austronesian languages (Fig. 2, no. 8), and the expansion of farmers speaking Bantu languages out of their tropical West African agricultural homeland after 1000 B.C. over most summer-rainfall regions of sub-equatorial Africa (Fig. 2, no. 1).

Diamond and Bellwood 2003: 598

And later in the same review:

These facts suggest that colonists derived ultimately from Austronesian-speaking farmers of coastal South China replaced or hybridized with the original population of the Philippines and Indonesia (related to modern Philippine Negritos, New Guineans, and Aboriginal Australians)

Diamond and Bellwood 2003: 601

Elsewhere, Diamond, in response to a communication Oppenheimer and Richards made in *Nature* (2001), wrote:

Where did this Austronesian expansion ultimately originate? The archaeological, linguistic, zoological and botanical evidence points overwhelmingly to China, where all of the Austronesians’ domestic animals, their pottery styles, their Neolithic tools, their irrigation and fishing technology, and many of their crops and artistic motifs originated…

Oppenheimer and Richards … overlook the fact that modern Austronesian peoples predominantly resemble Asian Mainland peoples in their genes, appearance and physical anthropology, whereas the original inhabitants of Island Southeast Asia (still attested by many relict populations today) resembled modern New Guineans and Aboriginal Australians.

Diamond 2001: 167

The purpose of this review is not simply to revisit those past controversies, but to update the balance of genetic and archaeological evidence for, or against, a predominant replacement and further ask a simple question, which was explicit, for instance, in Diamond’s description of the Out-of-Taiwan model above, yet difficult to explore evidentially. This question is: were pre-ceramic (i.e. pre-pottery) peoples in Island Southeast Asia simply roving hunter-gatherers, who adopted all the imported domesticates arriving with the Taiwanese Neolithic invasion, or were there already local animal domesticates and/or a widespread, mixed, more complex form of non-ceramic Neolithic sedentary existence with horticultural domestinations, alongside a foraging and maritime economy and trade network, already present in what is now Indonesia (Barker and Richards, 2013)?
This review concentrates both on archaeo-genetic evidence for the scale of human migration at the time of the Out-of-Taiwan Neolithic as well as genetic evidence for where the key boat-portable animal domesticates of that time (dogs, pigs and chickens) came from - and when.

It should be pointed out that the neighbouring island of New Guinea, to the east of Wallacea, has had a thriving non-ceramic horticultural Neolithic, since at least 10,000 years ago (Denham et al. 2003; Denham, T. (2011), with forest clearances going back well over 20,000 years, as well as clear evidence of hunting and maritime mobility. They had domestic pigs and dogs (see below). Also, there was widespread diffusion of bananas and sugarcane from the New Guinea region, where they had been domesticated, westward to Indonesia and to mainland Asia (Denham and Donohue 2009; Kennedy 2008) and possibly the giant Yam (Donohue and Denham 2010); also of a marsupial (*Phalanger orientalis*) carried from New Guinea to East Timor (White 2004). The New Guinean Neolithic evolved out of pre-existing foraging practices (Denham & Barton, 2006). Furthermore Solheim (1994, 2006) long argued for the importance of the great range mobility of maritime trading networks (his term: the Nusantao) throughout the western Pacific region, pre-out-of-Taiwan. No one, not even Bellwood disputes the New Guinea evidence to the east of Indonesia as Neolithic. Indeed, he argues that New Guinea is an example of a robust Neolithic culture, which kept Austronesian peoples and their languages at arm’s length on the beaches (e.g. p.127, Bellwood, 1997).

So, several clear questions remain unanswered about the 4,000-year Out-of-Taiwan ceramic event, and can be simply put: 1) How much genetic ancestry in Indonesia can be put down to an ancient Taiwanese rice-driven expansion and replacement. 2) Did Indonesia already have a complex subsistence culture including hunting, gathering and fishing from boats, but also some sedentary subsistence strategies, similar to those in New Guinea, which would actually be regarded as ‘Neolithic’ before East Asian pottery and rice arrived ~4,000 years ago? Archaeological studies in Indonesia and East Malaysia, including a large multidisciplinary studies carried out in Niah Cave and Gua Sireh in Sarawak, North Borneo have addressed the subsistence question and argue for less of an impact of the rice culture imported from Taiwan and the Philippines and more of a complex of different subsistence strategies as well as pre-existing rice (Barker & Richards 2010).

2. GENETIC EVIDENCE FOR TWO LATE HOLOCENE NEOLITHIC MIGRATIONS TO INDONESIA BRINGING ANIMAL DOMESTICATES

Concerning human migration and replacement, our group in the University of Huddersfield has recently extended our analysis and publication of evidence from both human uniparental (Y chromosome and mitochondrial DNA) genomes but also including genome-wide studies on the nuclear autosomal genome; and there are some agreements, but changes of emphasis in the new evidence (Soares et al. 2016; Brandao et al 2016). The rest of this review will look at the evidence, genetic and archaeological for imports of domestic animals into Indonesia from Taiwan or the Philippines and, conversely, any evidence for domesticated animals already present in Indonesia prior to Out-of-Taiwan.

Neolithic II (Out-of-Taiwan with red-slipped pottery)

As to whether there is any evidence for an Out-of-Taiwan human migration, the Huddersfield group’s two new large scale genomic founder analysis studies (Soares et al. 2016; Brandao et al. 2016) do indeed concur with Bellwood and Diamond in that there is a measurable genetic migration signature (~20%) in modern analyses of Island Southeast Asian
mitochondrial DNA (Brandao et al. 2016), that is consistent with a genetic migration from Taiwan towards the Philippines around 4,000 BP (i.e. the ‘Out-of-Taiwan’ expansion: also called Neolithic II in Anderson, 2005 and in Brandao et al. 2016). Archaeologically, however, there are not the dramatic changes in subsistence lifestyles expected of the Out-of-Taiwan model. This can be seen in key intensive multidisciplinary studies mounted in places like Niah Cave in Sarawak (Barker et al. 2007; reviewed by Barker and Richards 2013). The human migration signal is estimated to contribute 19.5% Neolithic lineages to the overall ancestry of modern Island Southeast Asia, including the Philippines (Brandao et al. 2016). However, the regional estimates of migration-impact of Out-of-Taiwan decline considerably within Indonesia south of the Philippines. Consistent with the claimed direction of spread of the Malayo-Polynesian languages, the average migration value is higher in the Philippines, where it still only amounts to less than one third (28%) of extant lineages. Lower values are consistently found in Indonesia (~10-20%), the highest, totalling 19.7%, being found in Eastern Indonesia (Sulawesi and the Lesser Sundas). This figure falls to 13.6% in Java, Sumatra and Bali (Western Indonesia) and only 10.3% in Kalimantan (Brandao et al. 2016). Although these figures confirm a significant migration, they hardly constitute a replacement of pre-existing Wallacean and Sunda ancestry. Note, the mtDNA candidates for “out-of-Taiwan” markers (Fig. 2a in Soares et al. 2016) are almost absent in parts of Borneo, Java and Eastern Indonesia.

Neolithic I (out-of-MSEA with cord-marked pottery)

One major problem for promoting the language, rice and red-slipped pottery ‘Out-of-Taiwan’ model as the defining ceramic-Neolithic event to affect Island Southeast Asia, is that there was in fact another, well characterised, but slightly older demic-ceramic-Neolithic event, which entered the Greater Sundas in the Late Holocene from Mainland Southeast Asia via the Malay Peninsula carrying cord & basket-impressed pottery and rice. Anderson (2005) has articulated the differences between the two Neolithic spreads and their chronology and interactions, both for the earlier Neolithic I from Mainland Southeast Asia and the later Neolithic II from Taiwan. Neolithic I has been further described and elaborated, especially in geographic distribution, by Bulbeck (2008 e.g. Map, Fig 4) and more recently by Denham (2017, Fig 7.2). One of the key geographic outcomes of this synthesis is that the spread of red-slipped Neolithic II pottery in Island Southeast Asia was, unlike the modern Austronesian language distribution, limited in Indonesia and Malaysia to the eastern tip of Sabah, Sulawesi and eastern Java, which low-coverage is rather similar to the sparse genetic impact of Neolithic II genetic findings above (see also Fig. 4, Brandao et al. 2016).

Looking at Neolithic I genetically, Brandao et al. (2016) have shown that that this expansion was associated with a parallel 10% adding to the 25–35 % Neolithic II lineages in the analyses of Late Holocene mtDNA contribution to the current ancestry of Island Southeast Asia (see also Soares et al 2016, Figs 2a & 2c; Brandao et al 2016 Fig. 4b). These MSEA lineages
(B5a1 and F1a1a) were possibly associated with the spread of Austro-Asiatic languages down the Malay Peninsula among West Malaysian Orang Asli, and impacted mainly in the still large land area of Western Indonesia (AKA Sundaland). They are rare or absent in either Taiwan or the Philippines. Finally, even if both Neolithic I & II are combined, they still only account for ~30% Indonesian ancestry. Most of the East Asian influence in Indonesia arrived earlier in the post-Glacial period, as is discussed next.

**Early Holocene and Late Pleistocene migrations between Mainland and Island Southeast Asia**

In the above genetic analyses, the two Late Holocene ceramic-associated population movements south across the sea from East Asia to Indonesia, pale into insignificance compared with the greater level of population translocations caused, not by culture expansion, but by three post-Glacial episodes of rapid sea level rise, the third of which occurred in the Early Holocene as a double surge at 8.4 ka and 7.2 ka and forced people living on flat coastland in Southeast Asia to take to boats and flee elsewhere to higher land. While much of this movement affected drowning Sundaland, a large part of the maritime movement was in the reverse direction from Indonesia north to Taiwan and is reflected in the genetic analysis (Soares et al. 2016, Fig 1c, Fig 5; Brandao et al 2016, Fig 4a).

In terms of absolute area of land loss even this third episode of sea-level rise was dwarfed by the preceding two catastrophic sea-level rise events at 14,500 and 11,500 years ago (Oppenheimer 1998). These two events had already started movements and mixing of peoples between Mainland Southeast Asia and what is now Island Southeast Asia well before the Holocene, let alone Out-of-Taiwan. Analyses of the phyllogeography of mitochondrial lineages E1, E2, moving from drowning Sundaland north into Taiwan and East Asia (Soares et al 2008, 2016) and of B4a1a, R9b1, N9a south from Mainland Southeast Asia in the reverse direction (Brandao et al, 2016; e.g. Fig. 4a) indicated massive population movements both ways between what is now ISEA and the East Asian mainland around the time of these events. All this evidence indicates that over the past 15,000 years there was overall much more significant genetic exchange between Mainland and Island Southeast Asia than the 10-20% southward flow estimated for Out-of-Taiwan (Brandao et al. 2016), let alone the variable replacement claims made by Bellwood and Diamond (above).

### 3. ARCHAEO-GENETIC EVIDENCE FOR ANIMAL DOMESTICATES AND THEIR ORIGINS PRIOR TO THE OUT-OF-TAIWAN NEOLITHIC II

**Archaeo-genetic evidence for animal domestinations in Island Southeast Asia not derived from Taiwan**

Several modern domestic animals in Island Southeast Asia have geographic evidence that links them to that region at or before the arrival of Out-of-Taiwan; the archaeo-genetic evidence for them being Taiwanese imports is, however, weak to absent. The three Island Southeast Asian domestic animals that do have fairly good archaeo-genetic evidence for their own domestic ancestral trail (dogs, pigs and chickens) are all relatively small and thus theoretically portable on a boat from Taiwan via the Philippines. They would thus have been prime candidates for the red-slipped potters to import from Taiwan. We can look at these three in turn, and by several criteria: archaeological date of domestication and/or introduction, geographic source of original wild species and genetic evidence for route of introduction to Island Southeast Asia.

**Dogs**
Study of Polynesian dogs and Australian dingoes indicates they were both originally introduced to those regions as domesticates. Study of their non-recombining mitochondrial DNA indicates only one founder haplotype (genotype) for Australian dingoes, called A29, which is also found at low rates in southern China, Thailand, Kalimantan and Bali and at 20% in New Guinea in the similar semi-feral New Guinea singing dog (*Canis hallstromi*; Koler-Matznick et al. 1957), which also has a closely related mtDNA haplotype A79. Significantly A29 is not found in the Philippines, Taiwan or Polynesia (Oskarsson et al. 2012), thus making its source origin in the Out-of-Taiwan Neolithic 2 event logically unlikely, but there is genetic evidence that the dingo was introduced down the Malay Peninsula from Mainland Southeast Asia. As far as arrival dates of the dingo in Australia are concerned an archaeological date of 3,500–5,000 years ago is usually cited (Milham & Thompson 1976, Gollan, 1984). However, given that the dingo descends apparently from single maternal founder, the founding mitochondrial age has been determined from 232 dingos and its pre-Polynesian route to Australia, (likely via New Guinea) charted phylogeographically:

The mtDNA diversity among dingoes indicates an introduction to Australia 4600–18,300 years BP. These results suggest that Australian dingoes … originate from dogs introduced to Indonesia via Mainland Southeast Asia before the Neolithic, and not from Taiwan together with the Austronesian expansion.

As far as pre-European Polynesian dogs are concerned, they (19 ancient DNA samples: Oskarsson et al 2012) all belonged to one of two haplotypes of the same canine A clade: Arc1 (32%) & Arc 2 (68%). Both haplotypes were found at all three pre-European Polynesian sites sampled across a wide area of Polynesia (Cook Islands, Hawaii & New Zealand: Oskarsson et al. 2012). Both haplotypes are absent in the Philippines and Taiwan, but both are present in the same Sunda, MSEA, and South China locations as A29 (with the single exception that there was no Arc1 detected in Kalimantan) thus overall echoing the same Mainland Southeast Asian, Sunda domestic dog migration source and route as for the dingo. The authors conclude:

However, the data presented here indicate that the Polynesian domestic dogs trace their ancestry from Mainland Southeast Asia, and that dogs may have been present in Island Southeast Asia before the arrival of the Neolithic.

As this list implies, the only endemic wild species found east of Wallace’s line is the Sulawesi warty pig and all the others are either found in Sundaland or the Philippines. Significantly, the pigs...

Pigs
Moving to another domesticate, pigs, a similar scenario, excluding Taiwan and the Philippines as sources of Indonesian and Pacific domestic pigs has been steadily built up (Larson et al 2007). The prehistory of endemic wild pigs in Island Southeast Asia is regionally distinctive and includes the Malay Peninsula in a cluster of regional, genetically-related wild pig species: *Sus verrucosus* (Javan pig), *Sus barbatus* (Kalimantan bearded pig), *Sus celebensis* (Sulawesi warty pig), *Sus philippensis* (Philippines) and *Sus scrofa* (found in the Malay Peninsula which has also spread widely in Mainland Asia, as a separate genetic branch (of which more below). As this list implies, the only endemic wild species found east of Wallace’s line is the Sulawesi warty pig and all the others are either found in Sundaland or the Philippines. Significantly, the
only Indonesian endemic pig species that has been domesticated is the Sulawesi warty pig for which archaeological evidence shows it was multiply translocated (effectively domesticated) by humans to Flores, Timor and the northern Moluccas during the Middle to Late Holocene (7000–3500 BP) and thus could not have come from Taiwan or the Philippines, either on a species or date-basis (Larson et al. 2007). In other words, this early domestication pre-dated out-of-Taiwan and could not have come from there.

However, even the domestic pig that was taken out to Melanesia and Polynesia ~3,100 years ago did not come from Taiwan. Almost all mitochondrial aDNA obtained from pre-European pigs from Lapita sites and Polynesia dating from 3,100 onwards belong to one genetic clade of *Sus scrofa*, the so-called Pacific Clade, the archaeological distribution of which, excludes Taiwan, the Philippines, Sulawesi and Kalimantan. While, it is clear that Pacific Clade pigs are linked with the main Late Holocene episodes of human dispersal into Near and Remote Oceania, the Pacific Clade trail goes back west, including Papua New Guinea, Maluku, the Lesser Sundas, Java, Sumatra (i.e. mainly southern and Eastern Indonesia) and the Malay Peninsula. Ultimately the trail stops in Vietnam, in Indo-China, where the ancestral Pacific Clade may possibly have been domesticated from a local *Sus scrofa*. The Pacific pig clade does not descend from any ISEA *Sus scrofa* clades nor even Peninsular Malaysian wild *Sus scrofa*. In other words out-of-Taiwan Neolithic II had no demonstrable role in introducing pigs to either Indonesia or Polynesia and this domestication would have most likely have come from Indo-China. In other words, the Pacific Pig clade appears, if anything, to fit Neolithic I route from Mainland Southeast Asia, through Sumatra, Java and the Lesser Sundas (Nusa Tenggarah) although, as mentioned above, it was not the first pig domestication in Indonesia in any case.

**Chickens**

Moving to the third important portable domestic animal in Island Southeast Asia, the chicken, there is again a currently defined mitochondrial clade (within Haplogroup D; commonest ancient haplotype H239) in ancient DNA, which spreads throughout Melanesia and Polynesia and is also found in Maluku (Thomson et al 2014). However, the genetic trail is slightly less clear than for pigs and dogs, in that currently the furthest west that this marker has been characterised are the Philippines and Maluku. The only ISEA location where the ancestral Polynesian mitochondrial SNP motif has been detected are Camiguin and Manila in the Philippines, but not Taiwan (Thomson et al 2014). Thus, founding Pacific chickens could have originated from and been domesticated somewhere in Southeast Asia rather than Taiwan. More broadly, haplogroup D clade is particularly frequent in wild red jungle fowl and fighting cocks in Indo-China and India (Liu et al. 2006).

**4. CONCLUSIONS**

The well-known hypothesis of a Late Holocene migration from Taiwan, to Indonesia (AKA Neolithic II), through the Philippines, carrying Austronesian-speaking rice farmers, red-slipped pottery and other domesticates, including animals, does have some support in recent human uniparental and autosomal genetic founder analysis, but it was not the epoch-changing event claimed, in comparison to earlier estimated migrations between Mainland and Island Southeast Asia during the Late Pleistocene and Early Holocene, resulting from three massive sea-level
risers. While, the genetic analysis does suggest an overall Late Holocene human genetic contribution from Taiwan to Indonesia, the estimates are only 10-20% using mitochondrial DNA, 15-20% for the Y-chromosome and 1-10% for nuclear autosomes, all estimates being regionally patchy in Indonesia. A parallel contemporary ceramic Neolithic migration also came from Mainland Southeast Asia, contributing a further 10% to Indonesian ancestry, mainly in western Indonesia.

There is no genetic evidence that the key animal domesticates (pigs, dogs and chickens) postulated to have been imported to Indonesia from Taiwan were in fact brought from Taiwan. Rather the genetic evidence for the dogs and pigs that ultimately went out to Oceania, is that they arrived as domesticates from Mainland Southeast Asia via the Malay Peninsula. For the dog clade, A29, that ended up, via Indonesia, in New Guinea and Australia, this probably arrived before either of the two ceramic Neolithics. The Sulawesi warty pig was locally domesticated in Eastern Indonesia and translocated to three other islands in the early Holocene, long before Out-of-Taiwan.

5. REFERENCES


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FACTORS OF WORK SATISFACTION AND ITS INFLUENCE TO OFFICE EMPLOYEE TURNOVER IN BANGKOK, THAILAND

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ABSTRACT

Employee turnover is an issue that organizations nowadays are facing regularly. This issue has put an effect to the organizations in terms of impact on job performance itself, lower productivity, lower profitability and lower customer satisfaction. As Thailand is an industrialized country with many new emerging neighboring AEC countries arising, it is believed that in the future there will be many more competition and more people involved in work environments where stress is endemic at every level of the organization that in turn can cause even more employee turnover problems. In this matter, work satisfaction has become the key element for employee motivation and means of managing workplace stress. This research then is to study of the relationships of work satisfaction and employee turnover intentions, to study on factors relating to workplace satisfaction, and to study on the factors that causes employees to leave the job. It has used Herzberg’s motivation-hygiene theory to look at the intrinsic and extrinsic factors in regards to the measure of satisfaction to work. The subject samples were 100 office working individuals in the areas of Bangkok Metropolitan. This study has shown that satisfaction does not directly lead to turnover intention; however, it is a contributor.

Keywords: Employee turnover, Work Satisfaction, Herzberg’s motivation-hygiene theory

1. INTRODUCTION

One challenging issue in business nowadays is employee turnover. Employee turnover is an unavoidable problem for the organization. The reasons employees leave the company are many where reasons include work environmental factor.

Employee turnover also can cause many problems for the company. It has been shown to be one of the most costly and seemingly intractable challenges confronting organizations globally. High employee turnover rates have been associated with lower productivity, reduced long-term growth and profitability, lowered customer satisfaction, etc.

The causes and effects of workplace stress on Thai employees' motivation to work and their productivity should be a topic of major concern for managers in Thailand. Employees account for a substantial amount of a company's costs and important factors such as stress that affect their satisfaction level and work motivations in which affect their productivity. It is clear at reduction in productivity leads to increased company costs.
Work satisfaction is the key element for employee motivation and a means of managing workplace stress. Workplace stress is a global problem that affects almost all professions around the world. About one-third of employees reported high levels of stress and workplace stress is also suggested to be the major cause of staff turnover (NIOSH, 1999).

Workplace stress is not a widely recognized problem in Thailand. However, the negative effects of workplace stress can be seen when employees exhibit signs of health problems, decreased job satisfaction or leave their jobs.

As Thailand is an industrialized country with many new emerging neighboring AEC countries arising, cost competitiveness will increase, therefore highest worker productivity is the main key to company efficiency, and it is believed that in the future there will be many more people involved in work environments where stress is endemic at every level of the organization.

Research Objectives:
- To study of theories and relationship of work satisfaction and employee turnover intentions.
- To examine the factors and rating related to workplace satisfaction
- To examine the factors and rating related to workplace satisfaction that cause employees leave the job.

Conceptual Framework:
2. METHODS

A brief overview of the nature of each study and the instruments used as follows. These will then be explained in more detail.

Pilot Study: Prior to commencing the main research, a small pilot study was undertaken to consider the viability of using interest inventories and job satisfaction measures with subjects. For this study, the researcher has adapted traditional Hygiene and Motivational Factors questionnaires to get the relevant data based on established theories.

Instruments: The instruments used in this study were:

(a) Measure of Satisfaction to Work – adapted from the dissertation of Ghanbahadur (2014) which includes the measuring Herzberg’s Motivation factors, Hygiene factors, and Intrinsic/Extrinsic job satisfaction respectively. There are two questions for each of the follow categories; Achievement, Work Itself, Recognition, Growth, Company Policy, Relationship with Peers, Work Security, Relationship with Supervisor, Remuneration, and Working Conditions. The responses are recorded on a five point Likert scale from ‘1’ for strongly disagree and ‘5’ for strongly agree. High scores would be indicating that the sample group was strongly agreed with the factors of job satisfaction that they received at their workplaces which were closely related to their job satisfaction pertaining to Herzberg’s Motivation factors, correspondingly low scores would be indicating their strong disagreement of Motivation factors leading to job satisfaction for them at their workplace. The measure of Employee Intention of Turnover, including the same factors to the prior part of Measure of Satisfaction to Work, however, putting the questions in on the contrary.

(b) Simple demographic and work experience data collecting questionnaire

2.1. Size of Dataset

100 Subjects in final Sample were office working individuals, all of whom were employed in mostly clerical, managerial and administrative occupations within the Asoke and Chidlom areas of Bangkok Metropolitan.

2.2. Variables in the study

Dependent Variables: The dependent variables in this research are motivators’ factors such as achievement, work itself, recognition, growth, company policy, and hygiene factors such as company policy, relationship with peers, work security, relationship with supervisor, money, and working conditions.

Independent Variables: The independent variables in this research are the demographic information: the respondents’ gender, age, education, years of work experience, current job position, and income level.

2.3. Data analysis

The data was examined using the frequency and percentage to consider the status of the subjects. Mean and standard deviation were used to analyze the result of this study.

2.4. Reliability

For the reliability of the research instrument a pre-test with 60 samples, which have the same characteristics with the sampling group, was made. This test is for assuring the clarity of the questions to achieve mutual understanding of the order, correctness, and corresponding between the answer and the study’s objectives. Any fault will be corrected for the reliability of the study.
before the actual data collection. From the collecting of the Pre-test data on 60 samples, the reliability statistics showed a Cronbach’s alpha coefficient at .92 and .93. With a result of more than 0.70, thus, these questions can be used for the study (Cronbach, 1951: 297-334).

3. RESULTS AND DISCUSSION

3.1. Measure of Employee Organization Satisfaction

The researcher has performed an analysis for the Measure of Employee Organization Satisfaction Level, by testing the eleven main factors. It was found that the respondents have the overall Measure of Employee Organization Satisfaction at ‘Agree’ (mean = 3.88). By considering at the eleven factors, the mean is respectively as follows: Relationship with Peers Factor (mean 4.13) Achievement Factor (mean 3.97) Growth Factor (mean 3.96) Recognition Factor (mean 3.92) Work Security Factor and Relationship with Supervisor (mean 3.90) Working Conditions Factor (mean 3.87) Remuneration Factor (mean 3.81) Work Itself (mean 3.71) and Company Policy (mean 3.68).

3.2. Measure of Employee Intension of Turnover

The researcher has performed an analysis for the Measure of Employee Intension of Turnover, by testing the eleven main factors of employee intensions of turnover. The overall Measure of Employee Intension of Turnover was at the level of ‘Agree’ (mean 3.43). There were six main factors which resulted in the level of ‘Agree’, respectively; Growth Factor - Limited training and potential for career advancement (mean 3.77) Work Security Factor - My workplace is located in an area where I do not feel comfortable. (mean 3.67) Company Policy - the limitations of company policy will impact me. (mean 3.53) Remuneration Factor - I am not fully satisfied because of the poor working condition I am provided with at work. (mean 3.50) Relationship with Supervisor - Limited support and relationship with my supervisor. (mean 3.46) and Achievement Factor - The Company does not recognize my achievements. (mean 3.41)

For the four main factors that the respondents tend to have chosen ‘Neutral’ were respectively; Relationship with Peers - Limited support and relationship with my supervisor. (mean 3.37) Work Itself - The job is not challenging and exciting. I have no power over decisions in my tasks. (mean 3.29) Employee Turnover Factor - I intend to discontinue my employment with at my current workplace. (mean 3.24) and Recognition Factor - The company does not recognize my tasks or the importance of my role within the company (mean 3.14).

3.3. Measure of Satisfaction Importance to Employee

The researcher has performed an analysis for the Measure of Satisfaction Importance to Employee. The respondents were asked to rank the list of 10 main criteria with the effects of their satisfaction level from 10 were the most to 1 were the least. The analysis has shown that Ranking least at 1 was the Company Policy, Rank 2 was Remuneration (money), Rank 3 was Work Security, Rank 4 was Recognition, Rank 5 was Growth, Rank 6 was Relationship with Peers, Rank 7 was Relationship, Rank 8 was Work Itself, Rank 9 was Achievement and Ranking the most at 10 was the Working Conditions.

3.4. Hypothesis Testing

Hypothesis: 1
The Demographic will influence the employee satisfaction level
Table 1 The ANOVA result of the difference of Satisfaction to Work with Demographic Data – Age

<table>
<thead>
<tr>
<th>Satisfaction to Work</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2.938</td>
<td>3</td>
<td>.979</td>
<td>3.933</td>
<td>.011*</td>
</tr>
<tr>
<td>Within Group</td>
<td>23.900</td>
<td>96</td>
<td>.249</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>26.838</td>
<td>99</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05

The ANOVA result Table 1 shows the significance level of the difference between satisfactions to work with the overall group of age at .011. In this matter, the hypothesis is accepted.

Hypothesis: 2
The Demographic will influence the employee intension to turn over

Table 2 The ANOVA result of difference between Intentions to turn over to Demographic Data - Age

<table>
<thead>
<tr>
<th>Intentions to turn over</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>4.124</td>
<td>3</td>
<td>1.375</td>
<td>3.698</td>
<td>.014*</td>
</tr>
<tr>
<td>Within Group</td>
<td>35.687</td>
<td>96</td>
<td>.372</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>39.811</td>
<td>99</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05

The ANOVA result Table 2 shows a significant level of 0.014, that is accepting the hypothesis that there is a significant relationship between the Intentions to turn over with the Demographic data.

Hypothesis: 3
Work Experience will influence the employee satisfaction level

Table 3 The ANOVA result of Satisfaction to Work with Work Experience - Years of Service

<table>
<thead>
<tr>
<th>Satisfaction to Work</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>3.554</td>
<td>5</td>
<td>.711</td>
<td>2.869</td>
<td>.019*</td>
</tr>
<tr>
<td>Within Group</td>
<td>23.284</td>
<td>94</td>
<td>.248</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>26.838</td>
<td>99</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05

Table 3 founded that there is a significant relationship between the respondents’ years of service at a significance level of .019. The detailed analysis shall be as followed.

Hypothesis: 4
Work Experience will influence the employee’s intention to turn over

Table 4 The ANOVA result of Turnover Intentions with Work Experience - Years of Service

<table>
<thead>
<tr>
<th>Turnover Intentions</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
</table>

*p<.05
From Table 4 it is found that there is a significant relationship between the years of service and the turnover intentions of the respondents at the significance level of .002.

**Hypothesis : 5**

*Employee satisfaction level will influence the employee's intention to turn over*

**Table 5**  
The Correlation of Satisfaction to Work with Turnover Intention

<table>
<thead>
<tr>
<th>Satisfaction to work</th>
<th>Intention to turnover</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R</td>
</tr>
<tr>
<td>Achievement</td>
<td>.171</td>
</tr>
<tr>
<td>Work Itself</td>
<td>.123</td>
</tr>
<tr>
<td>Recognition</td>
<td>.202*</td>
</tr>
<tr>
<td>Growth</td>
<td>.134</td>
</tr>
<tr>
<td>Company Policy</td>
<td>.038</td>
</tr>
<tr>
<td>Relationship with peers</td>
<td>.298**</td>
</tr>
<tr>
<td>Work Security</td>
<td>.363**</td>
</tr>
<tr>
<td>Relationship with Supervisor</td>
<td>.109</td>
</tr>
<tr>
<td>Remuneration</td>
<td>.339**</td>
</tr>
<tr>
<td>Work Condition</td>
<td>.057</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>.264</strong></td>
</tr>
</tbody>
</table>

* p < .05, ** p < .01

The Correlation Table 5 founded that the overall overview of Satisfaction to Work has no significant relationship with Turnover Intention at the significance level of .264.

By considering the factors of satisfaction to work, it is founded that the factor of recognition has significant relationships with turnover intention at the significance level of .004. Moreover, for the factor of Relationship with peers, work security, and remuneration also has a significant relationship with turnover intention at the significance level of .003, .000, and .001 accordingly.

**4. CONCLUSION**

From the key two independent variables and two dependent variables, the first objective of this study was to find the relationship between each independent factor which leads to the satisfaction level of staff (or their perception of satisfaction), where then in the second objective the researcher tested each independent factor which were based on the satisfaction levels, that would have caused staff to have the intention of turnover, the last objective was to test the two dependent factors as to how satisfaction levels links to intention of turnover. It is observed that while work satisfaction is an element or a contributor to turnover intentions where tested per
Hypothesis 5, however, this was rejected, therefore, there are other further variables to be further studied.

From Hypothesis 1 – the researcher has found main significance in the respondents’ age leading to their determination of satisfaction level. Although the level of education and gender did not show any significant results. This is likely due to that the factor of age shows maturity and understanding of work culture, leading to results which are less drastic and forgiving thus obtaining ‘better’ satisfaction results. This has resulted as was previously discussed from the secondary data in the literature review were Chiu (2005) has reported that age could moderate motivation to work and productivity.

From Hypothesis 2 – the research has found main significance in respondents’ age and education level lowers to their turnover intent. It is found that the higher the age the less the intent of turnover is found. It is also found that the higher the education level the less the intent of turnover is found. It can also be noted that the education level rises with the age level.

From Hypothesis 3 – the researcher has found main significance in the respondents’ ‘years of work experience’ and ‘income level’ as the main contributor to satisfaction. This matches with the concept of a “Happy Workplace” to the part of “Happy Income” where well income is one of the key factors for workplace satisfaction (Supaphun, Sakulkoo, &Tubsree, 2014). It was mentioned that when people are happy, they work effectively and their organization will gain the benefit. In other words, people are the most important assets in an organization or a company. (Yiengprugsawan et al. 2010)

From Hypothesis 4 – the researcher has found main significance in the respondents’ ‘years of work experience’ and ‘income level’ as the main contributor to their turnover intent. This is very similar to Hypothesis 3. It is found that the greater the work experience, the less the intent of turnover is found. It is also found that the higher the income level, the less the intent of turnover is found. Thus the “Happy Income” and having the understanding and stable environment are important factors. Whereas, Vroom (1964) as also suggested in the literature review that, if employees were to place higher values on the outcome of productivity (such as higher monetary rewards), their motivation to work would increase. This can also collate that the relationship between Hypothesis 4 and Hypothesis 2 as the greater the age typically results in greater work experience.

From Hypothesis 5 – the researcher has found that even though there is a relationship between workplace satisfaction and turnover intention, however, we cannot conclude that workplace satisfaction will directly contribute to turnover intention. Nevertheless, items that are noted which were the remuneration and workplace security as the two greatest concerns to turnover intent. This study reconfirmed that job security as a basis of workers’ need, with a significant effect on work attitude and motivation (Lahey, 1984) and “Happy Workplace” to the part of “Happy Income” where well income is one of the key points for workplace satisfaction (Supaphun, Sakulkoo, &Tubsree, 2014). Whereas Taylor (1911) also reported that if organizations wanted to make work behavior stable and predictable, and believed in using money as the primary motivator.

This study has shown through Hypothesis 5 that satisfaction does not directly lead to turnover intention, however, it is still a contributor. Therefore, the finding is still valid and applicable to reduce turnover. Consequently, workplace stress is still suggested to be the cause of staff turnover, however, not as one of the major causes during this study (NIOSH, 1999).
Furthermore, when the researcher has asked the respondents to rate the Measure of Satisfaction Importance to Employee, the respondents were asked to rank the factors that would consider them being satisfied with their career, the result was as follows:

<table>
<thead>
<tr>
<th>Rank</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Company Policy</td>
</tr>
<tr>
<td>2</td>
<td>Remuneration (money)</td>
</tr>
<tr>
<td>3</td>
<td>Work Security</td>
</tr>
<tr>
<td>4</td>
<td>Recognition</td>
</tr>
<tr>
<td>5</td>
<td>Growth</td>
</tr>
<tr>
<td>6</td>
<td>Relationship with Peers</td>
</tr>
<tr>
<td>7</td>
<td>Relationship with Supervisors</td>
</tr>
<tr>
<td>8</td>
<td>Work Itself</td>
</tr>
<tr>
<td>9</td>
<td>Achievement</td>
</tr>
<tr>
<td>10</td>
<td>Working Conditions</td>
</tr>
</tbody>
</table>

From Table 6, the analysis has shown that ranking least at 1 was the Company Policy, following by the Remuneration (money), Work Security, Recognition, Growth, Relationship with Peers, Relationship, Work Itself, Achievement and ranking the most at 10 was the Working Conditions.

This has reconfirmed with the previous research found in the literature review that the type of job an employee has – as relating to Work Itself - can influence on motivation and productivity (Friedlander, 1966). Moreover, lack of trust between managers and employees – as relating to relationship with supervisors - could therefore result in increased work stress and decreased productivity (Grant & Sumanth, 2009). As relating to the factor of achievement, the motivation-hygiene model states that motivation is achieved when employees are faced with challenging but enjoyable work where they can achieve, grow, and demonstrate responsibility, and advance within the organization (Dartey-Baah & Amoako, 2011). Furthermore, the same author (Dartey-Baah & Amoako, 2011) also discussed that that the hygiene or environmental factors, such as poor lighting, poor working condition – as related to working condition - , low salaries, and poor supervisor relationships are the causes of dissatisfaction in a job.

5. REFERENCES
Western and Islamic viewpoints on animal moral standing: the nexus of two cultures

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Abstract

The world acknowledges that human–animal interaction and co-existence can prevail due to the long-standing living connection and environment that they share on earth. However, due to the exponential growing demand and development, there exist perplexing issues of human-animal conflicts that cannot be mitigated effectively. Consequently, some organizations that are inclined towards absolute animal rights, choose radical approaches to offset and curb the influence from other organizations that are less favourable towards animal care and protection. This conflict requires ethical inquiries and reviews from a multitude of animal experts and ethicist. Western philosophers developed through time their own perception and connotation on the intrinsic values of animals and have expressed critical views on animal rights and the moral status of animals. Generally, their views are classified into three (3) main categories: 1) animals do not have moral status; 2) have but inferior to human beings and; 3) moral equality. Alternatively, Islamic viewpoints offer a complementary standpoint on the theological-ethical inquiries on how animals ought to be treated. By exploring on exhaustive referencing of voluminous literature resources including western philosophical statements and Islamic theological traditions, this paper intends to discuss the connection between Western and Islamic ethical viewpoints on animal moral standing. The authors conclude that both ethical cultures share the same common ground in valuing their positions based on the deontological and utilitarian concept. Western philosophies basically recognized the positioning of theological adherences of treating and protecting the animal being justly. Islam on the other hand offers a balanced and just code of ethics for treating animals to achieve the goal of life that is total adherence and dependency on the Will and Grace of Allah. Islam indicates variant connotation on the degree of human moral dignity depending on their ethical treatment towards animal beings.

Keywords: Animal Ethics, Animal Welfare, Animal Rights, Islamic Ethics

1. Introduction

In western, the debates and issue pertaining to animal moral standing is persistently dealing with tensions of multiculturalism environment. Consequently, the voice brought by religious entities are heard as another version of controversial issues that uncertainties unsolved since their existence is still considered as minorities (Kurth & Glasbergen, 2017). However, many animal scientists had recently welcomed theological approach to assist them in having a greater understanding on the animal moral standing since the current trend of science-religious dialogues touch on the aspects of rationality, method, knowledge. The effort is deemed as imperative, as a new holistic dimension in animal welfare studies require the effective process that emphasize the consideration of epistemological discourse relating to natural ethics and compassion while dealing with other living beings (Early, 2017).

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In this paper, we will discuss the general connection of the western philosophical views on the moral standing of animals with that from the Islamic point of views. The reason as to why these two cultures are selected is to examine whether there is any potential assimilation of values between them. Western philosophical views on the moral standing of animals were popularized since 1970, blending with the value of postmodernism, empiricism etc. Likewise, Islam has garnered recognition as a religion that professes on the divine rights of animals to be treated with care and passion. As the world’s fastest growing religion, Islam has produced prescriptive laws so-called Shariah law based on the Qur’an and Sunnah (Prophet’s traditions) in its insistence on the humane treatment of animals. Although there are some published papers pertaining to the ethical Islamic teachings of environmental protection and non-human animal use and care (Aghwan, Bello, Abubakar, Imlan, & Sazili, 2016; Foltz, 2000; Hamed, 1993; Rahman & Aidaros, 2012), however there are limited studies in leveraging the western and theological viewpoints on animal moral standings.

The intellectual discourse purported by this paper will help to demonstrate the connection and interception between these two distinctive cultures. The discussions would make an attempt to single out the differentials and similarities between both cultures. It is hoped that the readers of this paper would at least have an insight on how to increase convergence on the theological and philosophical approaches that subsequently will attempt to assist them in answering questions about how to instill a proper relationship between human and animal beings.

2. Methodology
This review paper explores on an exhaustive referencing of voluminous literature resources including western philosophical statements, traditions, and arguments pertaining to human-animal relationships. Various medium of Islamic judiciary sources namely Al-Qur’an, authentic Hadith, and Islamic exegesis texts (Tafsir) have been used to provide an interesting epistemological discourse on the prevalent issues in hand.

3. Variations of opinions in Western animal ethics philosophy
For ease of discussion, the authors shall classify western philosophical writings into three (3) general categories: 1) animals do not have moral status; 2) have but inferior to human beings and; 3) moral equality.

3.1 Animals do not have moral status
The earliest and clearest expression to reject the moral status of animals comes from Aristotle (384-322 B.C.E.). He popularized the concept of natural hierarchy of living beings where human beings (rational sentient animate material substances) take the first position, followed by animals (non-rational sentient animate material substances), and plants (non-sentient animate material substances) (Aristotle, 2007). Aristotle believed that only humans possess moral status (Livingston, 2001) and therefore humans can take precedence over animals (Brooman & Legge, 1997). Beauchamp suggested that this view has been used to add weight to strengthen the argument of the supremacy and rightful dominion of humans over animals (Beauchamp, 2008).

In Aristotle’s system, animals were obviously designed by natural selection to function and live in the manner for which they were designed, just like a paddle is designed to propel a canoe. Whilst, human beings are superior because of their capacity for using reason (logic) to guide their conduct, which animals lack and merely relying on instinct (S. Wilson, 2010) Therefore, Aristotle believes that, it

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313 Religion is considered as cultural and belief system of designated behaviors and practices, world views, texts, sanctified places, organizations, and ethics that relate humanity to the supernatural or transcendental (Nelson, 2010; Taves, 2009).
is natural and practically convenient that the existence of animals is to serve the needs of human beings (Singer, 1989).

Under the influences of Aristotelian’s view during the 17th century when early animal protection laws in Europe started, Rene Descartes (1596-1650), argues that animals are beings without the ability to think, are automata or machines that performs a function according to a predetermined set of coded instructions. This is based on his writings in the late 1600s that stated: "animals are mere machines but man stands alone". Barbara Mac Kinnon (2004), explained that Descartes is a source for reductionist to label all irrational beings must be lowered down to a material stage or “thinghood”. In that sense, that is how Descartes labeled animals as machines (MacKinnon, 2004).

In the era of Positivism, the fundamental reason why western thinkers became contentious on the moral status of animal is because, the subjective experiences of animals, animals in nature are unable to speak or articulate anything in the language that is easier for the normal human beings to understand. As a result, the westerners believe that they are unable to figure out whether the behavior shown by animals can determine whether the animals are suffering or are being deprived of the normal pleasures of life. As a matter of concern, many western scientists and philosophers had adopted a position described by (Tinbergen, 1951): ‘‘Because subjective phenomena cannot be observed objectively in animals, it is idle either to claim or to deny their existence.’’

Later, the Positivist school of thought attempted to shift away any subjective experience while emphasizing the objectivity in the study of animal behavior (Rollin, 1990). Meaning that, the Positivism maintain the premises that science shall be engaged with the material world whilst, immaterial spirits or metaphysical entities shall be clearly separated from science (Kolakowski, 1969). Positivists thinkers usually unable to recognize that animals have senses of emotions and other mental behaviors. For them, these subjective things do not have tangible scientific justifications as a basis of reasoning. They believe that the unobservable processes should not explain the observable entities and this falls outside the realms of scientific enquiry.

3.2 Have but inferior to human beings

The transition from the traditional thoughts on animal moral status was initiated during the 18th century by enlightenment thinkers, intellectual and philosophical movement whom dominated the world of ideas in Europe. Some of the philosophers engaged with the sense of Liberalism believe that animals did have feelings, and that unnecessary cruelty toward them was morally wrong. Influenced by this era, Immanuel Kant’s (1724-1804) developed a highly influential moral theory closely related to Worldview/Religious theories. According to Kant, although both animals and human beings have desires that can give access to them to commit any kind of actions, only human beings have the will and autonomy to evaluate whether their action is right or wrong. In his book titled The Metaphysics of Morals, Kant argues explicitly that human beings can have duties only to human beings (himself and others), since his duty to any other subject is a moral constraint by that subject’s will (Kant, 1996).

We have indirect duties towards animal beings by respecting them and do no cruel to them as a manifestation of doing goodness to human beings. He believes that animals do not have self-consciousness ability and cannot deliver rational thoughts or arguments. These make them non-autonomous creatures that cannot evaluate the good and bad actions, therefore they do not have any intrinsic value.

“Our duties towards animals are merely indirect duties towards humanity. Animal nature has analogies to human nature, and by doing our duties to animals in respect of manifestations of human nature; we indirectly do our duty to humanity.... We can judge the heart of a man by his treatment of animals.”

After the end of the enlightenment era, the acknowledgement towards the principles of natural law, supremacy of social order, tradition, hierarchy, organic unity, classicism, high culture still exists.
Roger Scruton (1944 - now), known as the traditional conservatism and animal welfare philosopher, argues that human beings should act and be at least one step ahead from animal beings. It is noticeable when he opposed the concept of human duties towards animal beings. By giving the scenario, treating wildlife animals with a sense of sympathy, piety and human virtue make no inherent benefit, in fact denying the wild status of animals. However, in respecting the historical connection between animal beings and us, human must maintain, as far as possible, the balance of nature. He said:

“There are...animals which have established links with us and come to share our lives and our fate in historically complex ways – particularly dog, cat and horse. I think these links should be respected, even if the animals themselves have no knowledge of them or of their social and cultural significance. For, in disrespecting these links, we disrespect ourselves”.

3.3 Animals have equal moral rights

The animal rights movement domination began from the late 20th century. The influential Animal right activist such as Tom Regan, argues that all animal beings should be awarded equal moral rights or "subjects-of-a-life" regardless of their status or their conditions of relationship with human beings. Regan believes it is a mistake to claim that animals have an indirect moral status or an unequal status, causing wrong interpretation that animals cannot have any rights (Regan, 2004). In his book writings entitled: The case of Animal Right, Regan emphasized “sentience” as a crucial aspect to obtain the moral evaluation towards animal beings. Regan suggests that animals are also conferred with “intrinsic values” or “inherent values” the same as humans have as tools for moral evaluation. He said: “if we want to ascribe value to all human beings regardless of their ability to be rational agents, then to be consistent, we must similarly ascribe it to non-humans”. Meaning to say animal beings have the right to have intrinsic values, just like some categories of human beings who are considered less rational such as infants and the severely mentally impaired.

Regan emphasized that human beings should refrain from committing any anthropocentric activities which require animal beings direct involvement such as commercialized animal farming, animal testing in the laboratory, capturing or hunting animal for commercial or recreational purposes (Regan, 2004). Animal rights movements believed that using animals are wrong by itself and animal welfare science facilitates more harm towards animals (Garner, 2005; Regan, 2004, 2010). Therefore, there are opinions indicating that the animal welfare and animal rights as two opposing positions (Francione, 1995, 2005; Regan, 2010).

In term of animal communication, practically, Regan emphasized human beings never understand the language used by every single animal. In the case of human beings, many people are still struggling to make any rational deduction of words as premises in response to what other people says. Hence it is not fair to say that human beings can justify that animals are rational or not. We have great constraints in understanding the language used by animals, so the criteria that is set forth by human beings to determine the status of rationality of any living individual being cannot be used (Regan, 2004).

Peter Singer, an Australian based moral philosopher believes an unequal consideration to animal beings meaning unequal consideration to the interest of other human beings. For this, he proposed a principle of equal consideration of interests to animals which requires human beings to weigh the comparable moral interests equally to all creatures who will be influenced by human actions. (Singer, 1993). Nevertheless, he still differentiates between the treatment level of human and animal beings. As he wrote: “It does not mean that animal have all the same right as you and I have. Animal liberationist does not minimize the obvious differences between most members of our species and member of other species” (Singer, 1985).

Richard D. Ryder is a famous animal rights advocate, who openly opposed the application of non-human being in research. He is well-known as the first who coined the term "human speciesism" (human supremacism or closed to assumption of mankind's superiority) in 1970. The term is to describe
the exclusion of all non-human animals from the rights, freedoms, and protections afforded to humans (Cavalieri, 2001). The gist of speciesism is perceived by many animal rights advocates as prejudice similar to racism or sexism, illogical and has no moral significance (Ryder, 2009).

Ryder used the term in an essay called "Experiments on Animals" (1971). He wrote in the essay that animal researchers seek to defend the scientific validity of animal experiments on the grounds of the similarity between humans and non-humans, while defending the morality of it on the grounds of the differences (Ryder, 1971). In his writing he said: "If, under special conditions, it were one day found possible to cross a professor of biology with an ape, would the offspring be kept in a cage or in a cradle?" (Ryder, 1971).

3.4 Recognizing the complexity of western views on animal moral issues

Classical views as portrayed by traditional philosophers basically emphasizes on the supremacy and rightful dominion of humans over animals. Consequently, animals are always being perceived as mechanistic things to human beings without inner quality and morality. We identified this impact from the long-influences of the hierarchy factor that causes detrimental effects on human psychological belief. Human being always set themselves with dominant attitudes towards animals and this believe is not easy to be eliminated even in this 21st century when there are too many incidents involving inhumane treatments towards animals.

However, during the age of enlightenment when the awareness in the aspect of human duties towards animal was raised, Kant argues that although we do not have direct duties to other living beings except for human beings, he believes by respecting animal beings, it will contribute to the indirect positive perception that human beings have senses of affection. For Scruton, human commits no duty to animal, but animal beings deserve a sense of respect since they are sentient beings and a part of the ecological communities like us. Hence, both views are seemed to be under the same agreement of animal welfare philosophers such as Rowan and Rollin (1983) as they said animals were protected for the benefits of humans, including the preservation of human morality.

Animal welfare philosophers basically welcome the anthropocentric activities on animal beings but, it must be reciprocated with the best treatment that can be awarded towards them, such as establishing the best humane care (value of loving and kindness) for animals living in confinements such as in the zoo or animal enclosures. For example, in May 2008 a British primatologist and animal welfare expert, Dame Jane Morris Goodall described Edinburgh Zoo's new primate enclosure as a "wonderful facility" where they (primates) "are probably better off or living in the wild in an area like Budongo, where one in six gets caught in a wire snare, and countries like Congo, where chimpanzees, monkeys and gorillas are shot for food commercially" (Walker, 2008).

However, for more recent animal rights philosophers like Peter Singer, Tom Regan and Ryder apparently, they have a different view; they challenged the conservative and orthodox views that dominate the attitudes of humans in their treatment of animals as has been previously detailed. Many animal right activists asserted that Abrahamic religious conviction, philosophical theories of natural science and the current developing scenarios have justified the superiority of human beings’ due to the nature of the world and sustaining the acts of denying moral status to animals. The fundamental key point of their thoughts, “animals have equal moral rights with human beings” regardless of the status of rationality (see table 1). The rights here as determined by animal rights philosophies are rights to have the same intrinsic values just like other human beings (including rationality) and the rights not to be kept by any type of anthropocentric meaning (including rights not to be kept as a pet or in the zoo setting).
3.4.1 Animal rights and problems of extremism

After recognizing the conflicting issues among western animal philosophers, our deep concern is now more towards animal right philosophical movements particularly when their non-democratic actions in resolving animal rights issues accentuate a sense of extremism particularly in dealing with their counterparts. We recognized three (3) types of extremism acts which are caused by animal rights activist movement. Firstly, the absolute endowment in animal rights protection is immoderate conviction when no chances are given to any type of anthropocentric activities towards animal (Regan, 2004, 2012). For example, animal activists have voiced opposition to the animal welfare bills in the United State even though the bills suggest a strict enforcement to the animal farm such as farm need to be audited by a third party hired by the state and establish a 10-member animal-care advisory council that would review standards set by the legislation at least every five years (Kramer & Patriot, 2009).

Secondly, most philosophers mentioned here, including animal right activists are predominantly atheist, meaning that they are non-believers to any God-centric religions. In the case of the former Chief Minister of Malacca, Mohamad Ali Rustam saying that God created monkeys and rats for experiments to benefit humans, Peter Singer remarkably responded to the chief minister's comment as yet another illustration of a regressive religion that handles the issues of animal rights. He stated even though religions do change, they change slowly, and tend to preserve attitudes that have become obsolete and often are positively harmful (Singer, 2010). For us, this accusation is too extreme and deemed as merely over-simplifying an issue out of ideological context. Rustam is a Muslim politician but we cannot simply regard his statement as the Islamic religious standpoint since he is not a person of authority on religious matters. Rustam’s response on this matter is purely made on his personal thought and conviction of a particular issue, an opinion that does not definitely reflect the official juxtaposition from a religious viewpoint. In fact, in western countries currently they are welcoming religious teachings as an approach to ensure the welfare of animals. For instance, the Humane Society of the United States Faith Outreach Program engages people and institutions of faith to come out with the premise that religious values call upon acts of animal protection issues (The Humane Society of the United States, 2017). On another occasion, there was a proposal from animal liberationists, among them are atheists, to establish a ‘Church of Animal Liberation’ as a religious organization with the hope that the freedom and exercise of believe are secured by constitutional rights (Friedrich, 2014).

Thirdly, the worst-case scenario happens when animal right activist groups such as SHAC (Stop Huntington Animal Cruelty uses coercive, radical militant-like measures in protecting the rights of animals rather than resolving it by using democratic or humanistic approaches. This outrageous group for instance, aggressively seeks to bankrupt the commercial animal toxicology laboratory Huntington Life Sciences because of their apparent disregard for the public. Another example is the PETA campaign that encourages people to go naked in front of the public, as a manifestation to articulate their disagreement towards the animal wool based clothing industry (People for the Ethical Treatment of Animals, 2017).

We observe that the approach used by PETA is not consistent with their organizational ethical slogan that they championed. Lee Hall, an animal right activist that prefers the democratic way as her mission to overcome human exploitation towards animal beings claimed that the group acts beyond humanistic acceptable norms and tarnish public perception towards animal right activist especially so when the media coverages portray a negative image. She said: “When faced with actions that seek to threaten rather than persuade, people quite naturally react, rather than respond, to them” (Hall, 2006).

Table 1: The ideologies and definition of thoughts by renown western philosophers.
4. Islam as a complimentary concept of human - animal relationship

Al-Qur’an is universally recognized and revered by all Muslims as the authentic Holy Scripture with pivotal guidelines revealed by God (Allah) through His Prophet Muhammad (peace be upon him). There are numerous types and species of animals ranging from livestock animals, wild animals, insects, reptiles, amphibians and aquatic creatures mentioned at various verses in the Holy Qur’an (see table 2). A number of the Surah(s) or chapters in the Qur’an are dedicated specifically to animals and are titled accordingly to them namely the cow (al-Baqarah), bee (al-Nahl), spider (al-Ankabut), ant (al-Naml), etc. (Ghuraybah, 2011; Musa, 2010). Fauna diversity clearly plays essential roles as one of the many intrinsic elements of our planet’s biodiversity and is considered as priceless in Islam since it symbolizes God’s (Allah) powers over His creations (Khalili, 2011; Taskhiri, 2011).

According to the verses in the Al-Qur’an, Shawkani and Mikdar Rusdi suggests fauna diversity have essential roles to be used and consumed (al-Intifa'/al-Isti‘mal) for human beings in a physical sense (Rusdi, 2010; Shawkani, 1995). According to Tafsir Ibn Kathir (Kathir, 1999), the word Hamulah comprises camel, horse and donkey are able to carry the loads or used for transportation services. Meanwhile, the word Farsha including animal species like sheep where its wool can be utilized (Al-Qur’an, 6: 142; 36:72). Ruminant such as cattle and goat are recognized as reputable sources of meat and milk for humans (Al-Qur’an, 23: 21; 16:5). Birds as flying creatures essentially play vital roles such as producing meat and eggs (permissible to be eaten based on Islamic dietary laws), and fish is a healthy and fresh food source (Al-Qur’an, 16: 14).
Table 2: shows the species of animals (by Class and Order) that are mentioned in the Holy Qur’an.

<table>
<thead>
<tr>
<th>Mammalia</th>
<th>Carnivora</th>
<th>Aves</th>
<th>Fish, Reptilia &amp; Amphibia</th>
<th>Insecta &amp; Arachnida</th>
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<tr>
<td>Camel</td>
<td>Elephant</td>
<td>Lion</td>
<td>Birds</td>
<td>Fish</td>
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<td>Cow</td>
<td>Goat</td>
<td>Wolf</td>
<td>Crow</td>
<td>Snake</td>
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<td>Cattle</td>
<td>Donkey</td>
<td>Dog</td>
<td><em>Ababil</em></td>
<td>Locust</td>
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<td>Sheep</td>
<td>Swine</td>
<td>Hoopoe</td>
<td>Worm</td>
<td>Spider</td>
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<td>Horse</td>
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4.1 Islam defines human moral status

Islamic teaching emphasizes human and animal support the equation that both are part of the community (*Ummah*) (Al-Qur’an, 6:38). The assertion is based on the origin of creations from the beginning of Adam, the first human being, created from two elements namely clay and water (Al-Qur’an, 20:55; 3:59; 6:2; 37:11; 15:26; 55:14; 25:54; 32:8). In turn, clay and water are also the fundamental elements for the creation of the animals (Al-Qur’an, 3:49; 24: 45). God through His revelation, through psychic endowment, encourage bees to make their hives close to human inhabitations (Al-Qur’an, 16:68). Meaning to say, animals in nature have the potential to live in harmony with human beings within a locality. In addition, the term “community” as mentioned in the Qur’an consolidates with the actual meaning of “ecological community” as has been defined by the Nature Education Group: “a group of actually or potentially interacting species living in the same location. Communities are bound together by a shared environment and a network of influence each species has on the other” (Nielsen, 2014).

Human is recognized as the Vicegerent of God Almighty (*Khalifa ul-llah*) with the responsibility to create governance values through the role of stewardship on this world (Al-Qur’an, 2:30). However, God (Allah) rewards a special eminence or reputation for human beings based on the quality of obedience towards God’s commands (*Amalu soliha*) (Al-Qur’an, 95:6) and for those who are doing righteous deeds in their life, these includes their positive attitudes towards other living beings (*Atqakum*) (Al-Qur’an, 49:13).

Hence, the “noble stature of human beings” (*Ahsani Taqwim*) (Al-Qur’an, 95:4) mentioned in the Holy Qur’an is not based on the dominancy in biological classification, but division is based on their inherent values of biological capacity they exemplify as human beings.

However, God will condemn human beings who conduct mischiefs or fail to conform to good intentions, in governing towards the environments and all living beings, and their moral status can be far lower (*Balhum adol*) than other God’s creations (Al-Qur’an, 7:179; 95:5; 35:39; 5:63).
4.2 Taking care of animal emotions

Prophet Muhammad (peace be upon him) emphasizes humankind to take care of the emotions of animals, which are generally subtle and relatively sensitive. Prophet Muhammad (peace be upon him) said: "In every wet heart (animal), there are rewards within (for those who are doing good deeds to Allah)" (Al-Bukhari, 2000). Therefore, God will reward human beings who treat animal beings with mercy and tolerance. Prophet Muhammad (peace be upon him) said: “Surely Allah is ever gentle, He loves gentleness. And Allah will give a reward of tenderness what is not given over loud and rude attitude and otherwise”. He also prohibits the provocative acts that could injure the emotion of the animals regardless of whether them being located in confinement or in the open space. The hadith tells: “We had our way with the Messenger of God (peace be upon him). Then he went to fulfill his wishes, and then we saw a bird with two chicks, then we took out two of her chicks. The bird came and circled its chicks, then the Prophet (peace be upon him). came and said: Who makes this bird becomes sorrow because of its chicks? Bring back these chicks to the mother bird”.

4.3 Animals and its faculty of minds

As Islam emphasize animals as communities like us, the religion’s teaching clearly denotes in its Holy Scripture that some of the animal beings are potentially awarded with the ability to speak and receiving God’s revelations. The Arabic word "awha” has been used in the case of the bee (Al-Qur’an, 16:68), meaning to say that animals have a sufficient degree of psychic endowment to understand and follow God's messages - a faculty which is higher than instinct and intuition.

In Surah an-Naml it denotes the conversation between a hoopoe with Prophet Solomon (peace be upon him). The capabilities of the hoopoe bird to communicate with human from the short-term exploration experience shows the bird may have had the potential to synthesize and decipher the information analytically (Al-Qur’an, 27: 22-26). The hoopoe bird’s reflective approach as a result from Solomon’s challenge shows the bird’s ability to identify the upcoming risks it need to face if the news statement is proven to be wrong. “[Solomon] (peace be upon him) said, “We will see whether you were truthful or were of the liars” (Al-Qur’an, 27: 27). There was another narration when an ant gave warnings to a group of ants (an-Naml) to retreat into their mounds to avoid being crushed by Solomon’s troops, Solomon heard the voices produced by the ant and smiles upon them to portray his sense of reaction (Al-Qur’an, 27:17-19). These verses gave the impression and assumption that animals have the ability to communicate with human beings, with each other, conveying good or bad responses to others and portray deceiving-like character towards others.

5. Reconciling Western and Islamic point of views on animal moral status: An integrated approach

5.1 Are humans more exceptional than other beings?

Human dominion or human supremacy is the main paradigm by which many traditional animal philosophers’ beliefs. However, is this supremacy due to the biological significant or caused by the emergence of exceptional aptitudes sparked by the brain function? Then this would lead us to another two-different set of questions. How about when human beings do mischief towards other environmental

314 Muslim, “Sahih Muslim”, 1131. Hadith no. 4697. Kitab al-Birr wa al-Silah wa al-Adab,
entities such as to the animal beings; and does the human being deserves to be considered to have exceptionality regardless of their immoral behavior?

Al-Qur’an indicates human beings were created as the best in stature, but it does not mean that the human with a larger size of brain could function with more rationality than the animal beings. Al-Qur’an in fact added that the human moral status could be far lower than an animal if they conduct mischief or does actions without using rationality. This corresponds with one research indicating that the genes controlling human brain development shows two opposite directions in comparison to other primates: (i) faster evolution in gene expression, and (ii) a likely slowdown in the evolution of protein sequences (Wang et al., 2006). Meaning to say the brain in a physical sense does not contribute more benefits than “using the function” of the brain to achieve “better deeds in life”.

As Charles Darwin said in The Descent of Man, 1871: "Man in his arrogance thinks of himself a great work, worthy the interposition of a deity. [Yet it is] more humble and, I believe, true to consider him created from animals”. The majority of Muslims had wrongly interpreted the figurative meaning from the above Darwin’s statement. We believe he is merely “intuitively saying” on this term, but his emphasize on the word “arrogance thinks” makes human beings always reflecting themselves as highly superior creatures with highly superior morality, by which the result of downgrading other sentience beings is a measure of a person’s morality.

Retrospective to this, we believe Marc Bekoff (an animal rights philosopher) is right based on his argument: “differences among species are differences in degree rather than kind, claims about human superiority are ill-founded, although they are often used to justify the domination of other animals and their homes” (Bekoff, 2012).

Thus, it fair to say that Islamic beliefs is more balanced in the judgment and the Al-Qur’an asserted the term “animal are communities like us” is somewhat possible to establish a middle path concept to reconcile between this puzzling conflict rather than making a pre-conclusive theory that animals are equal to human beings.

5.2 Human attitudes determine the quality of treatment towards animals

5.2.1 Dialogue of ethics of killing animal

This paper indicates that Islam recognizes that animal beings are to be utilized by human beings. This is reflected from Islamic teaching that accords the mastery of human beings towards other living beings. This proposition seemed quite plausible as Islam recognized the ritual of so called-Halal animal slaughtering. It may invite allegations that Islamic teachings do more unjust rather than just towards animal beings.

To answer this allegation, we need to fully understand the Islamic Halal-slaughtering ritual requirements. The ritual requires the butcher to recite Allah’s name (Tasmiyah) “Bismillahi wallahu Akbar” (In the Name of God and He is the Greatest) for each animal to be slaughtered.316 This requirement is based on verse 121 in Surah al-An’am (Chapter 6 in the Qur’an): “Do not eat an animal that does not mention the name of Allah over it and it is wicked”. The butcher need to use a very sharp tool or knife to ensure the animal can be slaughtered easily, without causing excessive sufferings. A

deep and singular incision is crucial to be implied so that the blood of the slaughtered animal gusts out from the jugular vein and coronoid artery and can be drained out faster in maintaining the high quality of meat. Beheading or decapitation is strongly prohibited. In addition, with the emergence of improved and effective technology of animal slaughtering methods, such as pneumatic stunning, will greatly assist and simplify with ease the slaughtering of animal beings (Fuseini, Wotton, Hadley, & Knowles, 2017). Hence, the Islamic Halal Slaughtering has brought a sense of “empathy-altruism value” yet helps to reduce the sufferings of animals if conducted with professionalism and ethical consideration of slaughtering the animal based on theological teachings. In addition, there is a hadith narrated by Ibn ‘Abbas and Al-Haakim says, Prophet Muhammad (peace be upon him) prohibits sharpening the knife in front of the animals, this is important to protect the animal’s emotion before the slaughtering process will be took place.

Killing an animal being is a natural thing to do by many other living beings. Can we assume a tiger in the wild killing a muntjac deer is something out of common norms of nature, or a brown bear fishing a sturgeon to feed its cubs is doing an injustice to the fish communities? Al-Qur’an emphasizes any moving creatures on earth has its own sustenance (Al-Qur’an, 11:6). There may come a time when there is a need for us to look at the killer whale as a source of diet if the larger population of killer whales keeps increasing along with the increasing population of seals and fishes in the open seas. This is what we call as naturally symbiosis behaviors in human-animal relationship, but since there is a connection between empathy with people and empathy with animals (Paul, 1998), it must be controlled by acknowledging the reciprocal benefits by both parties.

However, not all kind of “herbivorous animals’ can be considered Halal to eat according to Islam, for instance, the donkey or ass (Equus africanus asinus) and zebra (Equus zebra) are not-permitted to be eaten or another term for it is Non-Halal. In the past, donkeys are animals used for work and transportation, meaning Islam perceives that this animal is not suitable to be a delicacy on the dining table.

Not only are animals being food sources for human beings; animals are also sources of food for other animal beings. This is a tendency that has been recognized as truly altruism (Ridley, 1998) or where human beings produce food from animal sources to be served as food for their beloved cats and dogs.

The only thing that Islam opposes is the inhumane treatment towards animals by inflicting pain that causes suffering to them. Inflicting pain can be through two (2) variants first inflicting pain towards the animal’s emotion where Prophet Muhammad (peace be upon him) emphasizes that animals cannot be simply cursed or condemned, even though the animal is rebellious in action”. Second is the physical infliction of pain or disfigurement of injury, Narrated Ibn ‘Umar: I heard the Messenger of Allah (s) say, “May Allah curse the one who disfigures/mutilates an animal.” (An-Nasa’i). The Prophet forbade making animals fight each other (Tahrish)318. For instance, in Islam, rooster fighting is unlawful and totally prohibited (Haram). Animal fighting is considered as an immoral attitude that is usually done by uncivilized or primitive people. The act is considered as disrespecting animal beings and will only inflict pain to the animals and exhaust them. Furthermore, animal fighting is considered “intoxicating”, “the work of Satan”, non-Islamic activities that are

317 Muslim, “Sahih Muslim”, Hadith no. 1131 and 4699.
318 Sunan Abu Dawud 2562, Jami al-Tirmidhi, 319/1, Shahih Bukhari, Sahih Muslim
319 Al-Sarakhsi, Kitab al-Mabsut, 255; Abu Dawud, “Sunan Abi Dawud”. Hadith no. 2199
explicitly being prohibited in the Holy Qur’an (Al-Qur’an, 5:90). Based on a hadith "Allah cursed the one who makes something alive as a target “.320

5.2.2 The paragon of virtues

The ideologies of human dominion concur on the statement that human being possess right to intervene the structure of natural order to defend human’s sole interest as they ranked at the highest hierarchy of the social order.

For example, in the case of using animals as subjects for experimentation; research must be conducted with a sense of respect and gentleness based on ethical convention. This is inline as what Kant said about animal as “(Animal) the animate but non-rational part of creation… violent and cruel treatment of animals is ... intimately opposed to a human being’s duty to himself...; for it dulls his shared feeling of their suffering and so weakens and gradually uproots a natural disposition that is very serviceable to morality in one’s relations with other people.” (Kant, 1996) (page 192-193).

Scruton in his book titled Animal Rights and Wrongs, Original publication year 1998, publisher Demos, He suggested human beings are also a part of the balance of the ecosystem. But, anthropocentric activities should be based on the utilitarian way in providing humane treatment towards animal beings. He argues some livestock animals are remarkably being well cared for with better lives and deaths, even compared to humans. Every animal being deserves special protection, and cannot be overridden or cancelled as they face equal ecological difficulties. Favouritism to certain species groups or individuals is considered as invalid since many animals prone to pain, fear and even hunger. All of these gave weightage to the values such as Metaphysics, Personhood, Sympathy, Virtue Ethics, and Public Piety. (Scruton, 1998).

There is a sense of equilibrium between Kant and Scruton concept of respect towards animal with Islamic teaching. As the Prophet (peace be upon him) mentioned: “Allah has made it obligatory mercy applies in all cases. If you need to kill (Qisas punishment, war, etc.), then do mercy in the killing. And if you slaughter, then slaughter with mercy” (Hadith narrated by Imam Muslim (1955)).

The Prophet (peace be upon him) shows that animals deserve respect. There is evidence that the Prophet stroked the horse crown and says goodness upon it (Muslim, 2000). Even on disputable issues affecting the Islamic communities, for example whether it is permissible for a Muslim to touch a dog or not, there are evidences showing that Islam stipulates mercy towards the animal. In a narrative, God granted a man with forgiveness just because he gave a thirsty dog a drink by using his shoe and recite thankful to God for the goodness he did.321 There are many current researches indicating that pets such as dogs and cats will help to improve our health in a number of tangible ways such as the lowering levels or cortisol in blood – a hormone that is associated with stress, encouraging relaxing effects and helping on cancerous detection of human body via non-invasive screening tests (Challoner et al., 2013) (page 157-161).

Although we are of the opinion that animal rights movement asking for radical ideology by giving no space for any type of human centric activities that requires animal involvement (Singer, 1993), is impractical but to some extent we think Singer is right when he said animals do have interests and to be treated with full compassions. He said: “When these (animals) are similar to ours, or their pain is on a similar level, why give them less consideration?” Meaning to say that we as humans need to consider ways that can contribute to the betterment of human – animal relationship. “In the authentic hadith

320 Al-Bukhari, “Sahih al-Bukhari”, Hadith no. 5515; Muslim “Sahih Muslim”, Hadith no. 1958; Ahmad Hanbal, Musnad Ahmad, Hadith no. 6223.
321 Ibid., 191.
narrated by Al-Bukhari, Prophet Muhammad (peace be upon him) said: “Those who are not loving, they will not be loved by God” (Al-Bukhari, 2000), "Love to those living on earth, and you will be loved by those living in Heaven" (Al-Tirmidhi, 2000) and “(The first thing to come is) tie the camel (animal) and (then) trust in Allah.” (Sunan Al-Tirmidhi 2517). Hence, it is somewhat true that argument says social norms is always connected with our moral emotions (Fessler, 2002; Mercadillo, Díaz, & Barrios, 2007; Paul, 2000).

5.3 Intrinsic values: does it associate directly towards animal moral status?

By referring to the narration of Solomon with the hoopoe bird, Solomon with a troop of ants and the story of the mother bird of two chicks complaining to Prophet Muhammad (peace be upon him) two open questions arises; does this means to say that the Holy Qur’an recognized that animals have innate senses causing them to react as mentioned? and, do they tend to reveal themselves as they also have their own rights that must be fulfilled?

To answer such ontological questions, one has to approach them with constructive arguments. Firstly, we need to recap the circumstances that make those animals feel uneasy towards the specific conditions, whether it was the potential to be threatened by the Prophet, being crushed or the prospects of the chicks not returning to its mother bird forever. These feelings will not be in existence if the animals are non-knowledgeable in nature and possibly such knowledge is based from past experiences. However, according to Tom Regan, Descartes preferred to explain animal behavior without reference to inner episodes of awareness or flashback to past experiences faced by the animal, making the explanation that animals do not have moral status more acceptable. But for Regan, past experiences of the animal should be counted for without any discrimination (Regan, 2004). For us, Regan’s consideration on this matter seemed to be idealistic and this is supported by a scientific research published in the Nature Reviews of Neuroscience which revealed that animals have elements of both episodic-like memory and future planning (Clayton, Bussey, & Dickinson, 2003).

There is study indicate that depletion of prey population due to illegal hunting is considered a major threat to carnivorous populations since their survival depends directly on prey species richness and abundance density (Bhattarai, Wright, & Khatiwada, 2016). Thus, activities such as illegal hunting and uncontrol development will cause a great starvation to the carnivorous of which associate with their suffering and enjoyment feeling. Reasonably, looking on ecological perspective, it is plausible for Qur’an prescribes mankind to refrain from consuming the swine and boar (Al-Qur’an 5:3) because of the reason and as a “natural way” to ensure the continuous meat-supply for the carnivorous.

We cannot deny the fact that the chimpanzee is our closest living relative as proven by the number of researches on chimp genome sequences. Jane Morris Goodall in her book Reason of Hope had observed groups of chimpanzees performing ritual-like dances at the base of a waterfall in the Gombe Valley (Goodall & Berman, 1999). Other primatologists reported that chimpanzees respond in similar ways during harsh conditions such as heavy rains, windstorms, wildfires, and possibly even earthquakes (Harrod, 2014; Pruetz & LaDuke, 2010). These attributes are equipped with some version of what biologist E. O. Wilson calls “biophilia” or feel pleasure to seek connections with nature’ (E. O. Wilson, 1984).

Hence, feelings, struggling, suffering and pleasures are the things that are recognized as “sentience”. It is an affective state that determine the well-being of animals, subjective in nature and cannot be assessed objectively from a third person’s perspective by scientific methods (Nagel, 1974).
5.3.1 Animal responsibility: Do animals have duties?

This is rather a puzzling issue that we must admit, but it is quite an interesting topic to focus on, where we discovered it in arguments leading to the Formula of Humanity, Kant frankly categorizes non-human animals as mere means. He says: “Beings ... without reason, have only a relative worth, as means, and are therefore called things, whereas rational beings are called persons because their nature ... marks them out as an end in itself)” (Kant, 1996) (p. 37).

We find that Islam has a different perspective in this matter of concern. Muslim believes that God create animal beings as a sustenance for human beings and a benefit for all ecological benefits (Al-Qur’an, 22:37). Thus, using animal beings because of their instrumental value has brought the meaning those animals themselves as “reason of creation”. Kant’s statement saying animals “have only relative worth, as mean” is not precise. What about if animals wanted to protect their offspring from being disturbed by other intruders or young hatching leatherback turtles making their maiden journey to the open seas, does it seemed that they have a duty to increase their number of offspring and maintaining their heritage line? This is not an understatement as these animals do it not only for the sake of survival of future generations but also with an open heart with worthful meanings. This similar to what Islam reserves special “dignity of the creature” as Allah said: “And Allah has made for you from yourselves mates and has made for you from your mates, sons and grandchildren and has provided for you from the good things. Then in falsehood do they believe and in the favor of Allah they disbelieve?” (Al-Qur’an, 16:72).

In addition, God has given psychic endowment to animals with specific duties whilst living on planet earth such as, been commanded to make their hives closest to human inhabitants (Al-Qur’an, 16:68), crow taught Cain how to bury his brother, Abel (Al-Qur’an, 5:31), a big fish (of unspecified species) did swallow Prophet Jonah (peace be upon him) (Al-Qur’an, 37:142) and the act of a faithful dog accompanying a group of pious youths in the story of the People of the Cave, protecting them as they slept for more than 300 years (Al-Qur’an, 18: 18 and 22). Besides, animals have innate ability or kind of telos (nature of an animal, the set of interests constitutive of its unique form of life) to use natural sources to help cure themselves from ailments and diseases, termed as zoopharmacognosy. For example, a dog shakes water from its wet fur, many species of birds rub ants into their feathers; the ants will help to release chemical that combat parasites and infections. Macaws and many other animals eat clay soils to calm digestive system and neutralize toxic substances and orangutan chew leaves of the Commelina plant and then apply the chewed leaves as a balm for sore muscles, joints, and skin (Challoner et al., 2013) (page 176-177).

Islam also emphasizes that animal beings have spiritual responsibilities. Islam asserts that animals just like human beings will be gathered and judged in the Hereafter according to their deeds (Al-Qur’an, 6:38). The assertion of this statement is well founded as in Islam one perceives that God has the supreme power to recall, rectify and resemble any dismantled parts and spirits of animals. Hence, God deserves reverence, worship and exaltations from His creations including all beings (Ubudiyyah) (Al-Qur’an, 34:10; 2:260; 22:18; 64:1) (Rusdi, 2010). The method of praying is exclusively practical to animals, which is different from the praying rituals performed by human beings (Al-Qur’an, 24:41). Due to facts, we believe this has created a distinctive gap between Islam and western philosophers whom almost all do not recognize the element of prayers. Hence, due to cultural disputations it is sometimes difficult to unify arguments whether animals are non-rational and non-conscious beings.
Fair and inclusive justifications are pivotal aspects in defining animal moral status

![Diagram showing the relationship pathways of western philosophers and Islamic theological believes system on animal moral standing]

As we console the differences and subjectivity over the agreement on animal moral status between western philosophers and normative ethics brought by Islamic cultures, “sentience” and “innate behaviors” are among the value aspects that are shared by both cultures. Whilst, the epitome of treatment is based on the noble values namely “empathy-altruism”, “compassion” and “respect” as the way forward in making bioethical decisions towards the welfare of animal beings (see figure 1).

Comparatively, we find that Islamic teachings seems to be affiliated to western philosophers whom believe that animals are inferior to human beings but still shares senses or moral status, by which the following arguments corresponds to this theory:

a) Both humans and animals deserve respect and proper treatment from every single individual within communities.

b) Animals have established links with humans and historically have shared lives and fate with humans.

c) Animals can be killed and could be used for human benefits, but stringent ethical obligations giving holistically benefits for both parties need to be adhered.
For the second argument, the conjecture would be based on direct analysis. We believe those animals as told in the prophetic stories wanted to protect their successors or heritage lines and to protect their own dignity as in the case of Prophet Solomon (peace be upon him) and the hoopoe bird. Protection towards animal’s rights can be looked upon as an imperative matter for animals themselves as demonstrated by many animal experts emphasizing on the meaningful values of the Five Freedoms and Three R’s.

Fundamentally, Islam is based on the concept of *Maqasid al-Shari’ah* (Saifudddeen, Wei, Ibrahim, & Khotib, 2013). Likewise, there are similarities between the ethical values and objectives in the Islamic jurisdictions which points directly to generate welfare (*Maslahah*) (Al-Qur’an, 44:38-39; 8:21-22) and reject injury (*Mafsadah*) (Muzah, 2010; Rahim, 2014). As Islam emphasizes its teachings as a mercy to the worlds (Al-Qur’an, 21:107) human beings need to recognize them as inalienable rights that determine our survival and vitality on earth (Gharebaghi, Mahdavi, Ghasemi, Dibaei, & Heidary, 2008).

However, to say that animal have senses of rationality and consciousness by simply relying on the assumption that they have feelings and are prone to past experiences is not evidently adequate. It is possible to say that those 3 species as mentioned previously have the sense of rationality and consciousness. In addition, the statement In Surah al-Araf 7:176, delivers an ambiguous statement for us to prove that animals in general are conscious or not or to make comparisons about the "lower" and "higher" animals as Islam itself has not detailed them in great length.

Deliberating on whether animals have or not senses of consciousness and rationality is not the key point of this paper. However, it is not wrong for us to address The Cambridge Declaration on Consciousness written by a group of prominent international cognitive neuroscientists where on their final statement indicates that “*humans are not unique in possessing the neurological substrates that generate consciousness. Nonhuman animals, including all mammals and birds, and many other creatures, including octopuses, also possess these neurological substrates.*”(Low et al., 2012). From first impression, we are of the opinion that this could be an antidote to address the unresolved dilemmas on animal consciousness and morality, but eventually we conclude that it is a decree concerning the matter so-called “substrates” that could be the basis to indicate that animals have conscious and rationality on par with human beings. For this we hypothesis, if there are two glasses of diluted clear cordial, both containing water and sweetener (presume it has zero calorie), through the naked eye how can we determine which one tastes better than the other?

Hence, the issues of animal consciousness have been proclaimed as the “difficult problem” which makes most animal philosophers and scientists deceived and confused. The current dilemma for the majority of western animal ethic papers is the failure to differentiate between the term “need” for animal welfare and the question whether the animal has rationality and experience consciousness or not (Dawkins, 2017; Würbel, 2009).

One need to draw a demarcation line and to determine the benchmark between the wide contrasting views and opinions so that a harmonize system could be in existence. For us, empirical justifications are useful, but it cannot be too rigid by totally rejecting or alienating any subjective views. We have to be just, meaning that multi-disciplinary approach is the best tool to explore and define the integrity of animal intrinsic values and behaviors. Knowing the other discipline’s point of view will help us to acknowledge their norm motions of what reasons animals can be utilized and protected. For example, acknowledging and applying the knowledge of integration of animal practitioners-based experiences, animal-based data, animal cognition, species-specific behavior and, animal welfare laws and jurisdiction. In addition, infiltration to other religious values such as from Christian perspectives on
animal moral status will help to navigate humane treatment towards animals to the more faithful and comprehensive way of worldviews.

7 Conclusion

We recognize consensus amongst all philosophers and Islamic theological views that all animals share aspects of morality namely “sentience” (ability to feel struggling, suffering and pleasures and some attributes of “innate behaviors” Likewise, we are in agreement that animal beings deserve senses of “empathy-altruism”, “compassion” and “respect” as a moral concern from human beings.

Islam identifies both human and animal beings working as communities. Nevertheless, animal right philosophers believe animals shares equal moral rights with human beings”, meaning that both are "subjects-of-a-life”. With regards to the social hierarchy order, many western philosophers still stand on the paradigm of humans’ dominion. Whilst, animal right philosophers emphasize absolute rights protections towards animal beings and the result of which no anthropocentric activities shall be imposed towards animal beings. However, Islam emphasizes that the moral status of human beings is not static but flexible, the rank order would be considerably changed from the highest level or even to the lowest level of dignity compared to other living beings depending on their deeds and virtues. Human beings must accomplish their duties by regarding it as Amanah or Trusteeship, while trying to create harmony with the environment and to avoid its destruction. Human beings who fails to conform towards proper treatment and ethical manner, will find them being scaled down by rank that is lower than other sentient beings. As Islam belief in God’s supremacy, all activities, measures, and behaviors portrayed by human-animal beings belongs to the ultimate “Grace of God”. This concept is not agreeable upon by most animal western philosophers, even though they admit that theological teachings is recognized as an effective tool towards better treatment concerns for animal beings (see figure 1).

As shown above Islamic teachings seems to be affiliated to western philosophers whom believe that animals are inferior to human beings but still shares senses or moral status. But, theological system is less agreeable with the animal rights activist statement giving no credits to anthropocentric activities towards animal even though the animal is given proper humane treatment. Extremism acts are an over exaggeration in protecting animals and is considered as loopholes and as such Islam considers them to be followers of the Satanic footstep (Al-Qur’an, 6:141) (Basmeth, 1994) (Kathir, 1999). It is strongly advisable to adhere to the concept of Moderation (Wasatiyyah) as a golden rule and an element of virtue ethics that promote balanced and just beneficences of the entire living being systems.

Finally, the paper concludes that the holistic, comprehensive and inclusiveness of the symbiosis of multi-disciplinary approaches will drive us to venture further in recognizing other similitude and differential of intrinsic values that exist in both human and animals. It must be portrayed for the benefits of all living communities regardless of their status of rationality or consciousness. As Peter Singer said, our biology that has shaped our ethical views (Ridley, 1998; Singer, 1981).

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9 References


SENTIMENT OF MIDDLE EAST’S ANTI-IMMIGRANT IN GERMAN PRO-MIGRANT POLICY:
Perspective: Cosmopolitanism vs. Communitarianism
Tara Ferakanita

Abstract

The issue of immigration nowadays reaches the boiling point to become central topic of debate as it gains the pros and cons. In decades, global migration has grown more rapidly than population growth. In August 2015, tensions from the flood of migrants’ flows from the Middle East have grown to an extreme stage. This staggering scale of migrants has shaken the European order and activated sudden political changes that support the political rights of the Germans. German politics split into two fractions. The first fraction assumed that the state needed immigrants who have created a positive climate in the economic sector. As an opposition to the first fraction, the second fraction considers to reject cultural differences between Germans and immigrants.

In this article journal, the writer would like to highlight the anti-immigrant sentiment as a cultural panic, not an economic panic. Despite the 2005 German constitution policy loosen the citizenship status, the writer argues that its policy is not entirely accepted by Germans whom questioned about the meaning of identity and how people born out of Europe can become part of European society. This article journal focuses on the anti-immigrant response to the reconstruction of German identity in the perspective of the Cosmopolitanism vs. Communitarianism approach. By using these perspectives, the writer concludes that there is a reconstruction of German identity to become a state which can be deal with the changes.

Keywords: Immigrants, identity, Germany, Europe, Middle East, Cosmopolitanism vs. Communitarianism

At the beginning of the text, the author will explain the definition of the migrant. Then the author will explain the relevance of migrant issues in the realm of International Relations. Finally, as a case study on the phenomenon of migrants in international relations, the authors chose the German state as its analytical unit by looking at the reconstruction of German identity based on its policy in response to the sentiment of Middle Eastern immigrants in their country. This paper will use the approach of Cosmopolitanism and Communitarianism. Furthermore, this article will answer the question: how did Germany reconstruct its identity in response to migrant issues?

In the International Relations, refugees define as people who leave their countries or places both individually and in groups due to fear and discomfort that can threaten their safety and survival. Refugees are a classic problem that often arises in the history of human civilization. There were so many factors that a group of people fled. It can be caused by natural disasters, hunger, or because of the fear of war that threatens their safety.

In the beginning, the displacement of the population is just a domestic matter of a country. But along with the many countries that pay attention to this issue so that it becomes a common
problem. Refugees crossing national borders and entering into a sovereign territory of another
country deserve attention because it is a universal matter.

When a refugee leaves his home country or previous residence, they leave most of their lives,
homes, possessions and family. This problem poses a problematic one of which is the fate of
these people. How can they survive in difficult conditions, how they seek a better life for
themselves and their descendants because the refugees cannot be protected by their home
country because they are forced to leave their country. Therefore, protection and assistance to
them is the responsibility of the international community.322

In recent years especially since the turmoil in the Middle East, many communities in conflict
areas such as Syria and Yemen are fleeing abroad. In general, they want to evacuate in areas
where there are many peaceful societies, in countries in Europe. However, the fact that many
European countries do not accept immigrants from the Middle East because of the economic
crisis that hit Europe, making European countries unable to accommodate and care for the
refugees because of limited costs. In addition, there are still a lot of sentiments of Islam phobia
and Xenophobia in European countries especially due to the rise of ISIS terror attacks to
Western countries to make many countries are reluctant to accommodate the refugees. Even if
there is, they only want to accept refugees who are non-Muslim. 323

Germany is one of the countries in Europe which is the main destination for refugees from
Middle East. They see Germany as a decent place for them to flee. In addition to the fairly
stable economic conditions in Europe, they see Germany as a friendly and open country for
immigrants because of Germany's long history of refugees and immigrants from the eastern part
of Europe.

Previously, Germany was one of the most influential countries in the international world since
the War of Prussia.324 Germany was also actively involved in World Wars I and II. Germany is
one of the most famous countries with a very strong Fascist ideology during Adolf Hitler's reign.
This ideology became the power and power of Germany after World War I. German fascism is
the spirit of chauvinism of the German nation as the nation of Aryan race descendants of the
great and noble, different from other nations considered as primitive descendants. Through the
ideology Fasisime, Hitler raise Germany and mastered Germany with his iron hand. Hitler's
full-power power resurrected Germany from World War I defeat and incited hatred for the
World War I allies countries.

Fascism was also a trigger for Germany in starting World War II, which eventually separated
Germany into two, West Germany and East Germany. In addition, fascism also caused the
exclusion of the people they called Lebensunwertes Leben, among them Jews, Slavs, Romans,
and Homosexuals. Many of those who fled out of Germany are from ethnic Jews.325 However,
the German power led by Hitler finally began to collapse due to Germany's repeated defeat in World War II. The defeat of Germany in the two World Wars, made the German population suffer greatly. Many of those who fled to neighboring countries are safer from war disturbances. Germany must also be divided into two, based on different powers, in East Germany controlled by the Soviet Union and West Germany by the United States. The division of power is also motivated by ideological differences from East Germany and West Germany as well as a sign of the fall of the power of fascist ideology in Germany.

The decline in the number of German human resources is a result of its defeat in the two World Wars, both in death and in displacement, resulted in Germany being divided into West Germany and East Germany difficulty in rebuilding its war-torn country. Therefore, in order to facilitate the flow of development, Germany (especially West Germany) began to think to provide opportunities for people from outside Germany to become auxiliary work there. Most come from countries such as Turkey, Tunisia, and the North African country. Usually they also receive refugees from Eastern European countries, even their brothers in East Germany who escaped from the communist regime to work in Germany. Since then, Germany has become more open to refugees and immigrants.

In 1989 the collapse of the Berlin Wall marked the end of an ideological debate separating West Germany and East Germany as one by applying a system of parliamentary federal government. The fall of the Berlin Wall is also the beginning of German openness with the outside world, which makes Germany a more democratic country. The unification of West Germany and East Germany also led to an increase in immigration flows in Germany.

As explained earlier, Germany was originally a recipient country of "Immigrant Workers", then a country with controlled immigration flows. In 1960, West Germany had built bilateral cooperation with several countries such as Italy, Morocco, Turkey, Tunisia and Yugoslavia to recruit foreign workers in addition to workers in West Germany with simple skilled and low-paid workers. Most of the so-called "guest workers" at that time had returned to their home countries in southern or southeastern Europe, but not a few settled in Germany. Many of the Turkish migrants who came later settled. Therefore, Germany is one of the countries in Western Europe that received many immigrants to foster industrialization in postwar Germany.

In the end, in the 1980s the number of immigrants in Germany increased sharply, and so needed a policy of integration between the German native community and the immigrant group. The number of immigrants that increased sharply due to Europe (especially Western Europe) is known as a dynamic region with the swift flow of money, goods, services and information from and to Europe which makes it an indicator of high level of economic welfare of Europe (West). In addition, their presence (group of immigrant workers) in Germany can help the economy in the home country of immigrants whose majority is a developing country. Thus, many "guest workers" decided to settle in Germany.

Based on the increasing flow of German migrations every year, there are two main groups of immigrants in Germany, Turkish immigrants and German trans migrants who have settled for

generations in former Soviet states, Romania and Poland and then back to Germany.\textsuperscript{327} Both groups of immigrants caused the number of immigration flows per capita in Germany in the 1980s was even much higher than that figure in classical immigration countries such as the United States, Canada or Australia. Based on the data obtained, there are more than 15 million people with "immigration background" who live in Germany. According to the Federal Statistics Agency definition, the group includes all immigrants in Germany, as well as people born in Germany from parents who are at least one of them immigrants. Approximately 7 million of them are foreign nationals, and 8 million people have gained German citizenship or by naturalization, or because they belong to the 4 million trans migrants of German descent.\textsuperscript{328} Turkish immigrants are the largest group of immigrants in Germany. According to the data obtained, Germany has nearly four million Muslim population and 2.5 million of the Muslim population are Turkish immigrants. Since 1961 immigrants from Turkey began to enter Germany due to the need for human resources as labor and experts in Germany is quite high. Judging from the experience of German history, the lack of human resources in Germany is based on successive German involvement in the World War as well as the Holocaust occurring in Germany during the reign of Adolf Hitler. Therefore, in 1961 the immigrants came to Germany at the invitation of Germany as guest workers and were expected to encourage the German industrialization process that was developing at that time. That is a piece of history as to why Germany is becoming more open to immigrants and refugees.

As the wave of refugees in Europe due to the conflict in the Middle East increasingly recalls, the German government in the era of leadership Angela Merkel also opened the door of his country for refugees who want to seek peace in Europe. German Deputy Chancellor Sigmar Gabriel revealed, considering the flow of refugees from the Middle East and other countries to Europe, Germany has a capacity to accommodate up to 500,000 per year. "It could also be more, up to 800,000 refugees\textsuperscript{329}, said the top Social Democrats politician. In line with his deputy, Chancellor Angela Merkel confirmed in a press conference in Berlin: "Germany is happy, becoming a destination country and a symbol of hope for refugees." However, Merkel's policy has provoked protests from other EU countries in the Balkans, such as Serbia, Slovenia, and Hungary. They assume that Germany's policy of opening its country to refugees from the Middle East has left the Balkan countries overwhelmed with the refugees crossing the Balkans. This resulted in Hungary\textsuperscript{330} and Serbia\textsuperscript{331} closing the country's borders from refugees to cross into Germany.

Merkel's policy has made the refugees from the Middle East from Syria feeling touched by Merkel. The German government over the refugees is even called Merkel as a "mother" for the

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\textsuperscript{327} Ibid.
\textsuperscript{328} Ibid.
\textsuperscript{330} Bendung laju migran, Hungaria tutup perbatasan dengan Kroasia” , dari website http://www.bbc.com/indonesia/dunia/2015/10/151017_dunia_hungaria_migran, diakses pada tanggal 13 Desember 2016, Pukul 23.15 WIB
refugees. However, over time, Germany began to overwhelm to accommodate refugees who move en masse to Germany. More and more from German society, especially from the right faction that refuses refugees because they feel the surge of refugees coming to Germany can harm and threaten the number of native Germans. This can be seen from the many actions performed by right-wing groups to refuse refugees. For example the case of the Pegida movement of the movement The movement declared itself a patriotic European group that was carrying out Islamization, as most of the refugees were Muslim. In the demo there were also ordinary citizens, who said they did not understand the extreme right, wondering about the future of their children and grandchildren, if too many refugees carrying other cultures come to Germany. Weather information Chancellor Angela Merkel also declined. Nevertheless, Merkel remains unmoved will continue to accommodate the large number of refugees from conflict areas. Almost Germany has reached an agreement with Turkey in handling refugee quotas as the sluggish action of the EU in determining the number of refugee quotas. Until now, Germany and the EU are still burning to reach agreement between countries to joint crisis in Europe.

Analyzed from its characteristics, Germany is one of the European nations that have special characteristics where its experience in the two World Wars, the cruelty of the Nazi era, and experienced periods of grim where Germany once divided in the Cold War to form the German society into a very love peace. Therefore, the German foreign policy issue of the refugee crisis in Europe is very interesting to see as Germany has its own historical experience related to the issue of racism and the unique characteristic of a very peace-loving nation and has a strong influence on EU integration in which Germany is a group of countries a pioneer in the formation of the European Union and a country that until 2015 strongly supports the influx of refugees into Europe amid the rise of Eurosceptic and the issue of Xenophobia in Western Europe.

The next paragraph will discuss the two concepts the author will use to analyze this phenomenon. The two concepts are Cosmopolitanism and Communitarianism. Cosmopolitanism and Communitarianism are two concepts that address the limitations of a country's responsibility. Cosmopolitanism recognizes that moral responsibility is for all humankind, not just for fellow citizens. Country boundaries exist and are real, but do not apply in the context of morality (morally legitimate). There is a strangers' moral responsibility on the basis of the right of hospitality to all men (Brown, 2011) that governs relations between members and strangers (Kant). It is built on human rights and civil rights.

The current world conditions illustrate that the welfare of each country is different, there are rich and poor countries. According to Cosmopolitanism, rigid territorial boundaries protect the rich country and limit the poor development. Therefore, territorial boundaries can not be justified morally. Refugees generally move from a poor or "worse" country to a rich or

Refusal of refugees means denying them a chance to live better. The state can not morally account for their choice to reject people alive better.

Communitarianism recognizes that the state has only limited responsibility for the lives of non-citizens. According to Hegel\textsuperscript{336}, Communitarianism distinguishes between ethics to community and morality to the whole humankind. The goal is to maintain the sovereignty of a country. It may be that norms are developed to determine what a country should do, but reject the existence of international rules binding on the state.

According to Michael Walzer\textsuperscript{337}, the state has the right to self-determinate membership in the country. The existing state boundaries must be maintained not because they are exclusive, but because they are inclusive for their members. According to him, in a country, there is a common understanding (shared understanding) formed by members. This understanding forms an identity that then forms "the self". If any foreigner wishes to enter the country, must agree on such mutual understanding. If they do not agree, then the state is not responsible for them. Refugees may be admitted within the territorial boundaries of the state, but they must agree on mutual understanding and community identity. If refugees can not adapt, the state is not responsible for them. Furthermore, according to Walzer, the fundamental right to protect the national culture limits the responsibility of refugees and asylum seekers. If the cost of taking care of refugees can still be borne by the state, then the state should not reject them. But not necessarily means the state can be forced to accept them in large numbers. Countries should prioritize asylum seekers compared to refugees.

From the explanations of the two concepts, the authors see that Germany initially positioned its country as a party that embraces Cosmopolitanism. This is evidenced by the German constitution which guarantees the right of political asylum. The Constitution states, "Human dignity is inviolable."\textsuperscript{338} According to National Geographic, more Germans are helping the refugees than throwing stones and scolding.\textsuperscript{339}

In 2015, about 700 people filled the university auditorium in a town meeting.\textsuperscript{340} The meeting responded to the issue of immigrant raids in their country. Questions such as "Who will finance the refugees? Do they not transmit disease? "Emerging from German citizens. In German, there is a term Überfremdung\textsuperscript{341}, or "exile alienation". It is a fear that the state will become hard to recognize, because there are too many foreigners in it. So the environment is filled with a group of people who talk and behave differently with them. The fear is displayed in a manner full of anger and hatred. Demonstrations occur at night and fiery rhetorical speeches are performed by right-wing orators.\textsuperscript{342} Attacks also occur hundreds of times to refugee shelters even though most

\textsuperscript{335} Ibid
\textsuperscript{338} National Geographic, edisi October 2016.
\textsuperscript{339} Ibid.
\textsuperscript{340} Ibid, hal. 107.
\textsuperscript{341} Ibid, hal. 106
\textsuperscript{342} Ibid.
places are still empty. A few days before Merkel's press conference, a number of thugs threw molotov cocktails into a child's bedroom at a shelter near Hanover.

Germans and refugees face two very different cultures. In addition, language differences are also a limitation that still cannot be bridged. The data show that the attitude of sentiment towards immigrants in Germany is the most prominent in the region with the least amount of immigrants in the former state of East Germany. That part of the country remains poorer than the population of West Germany. In addition, as mentioned earlier, in terms of economy, Germany is a strong country with low unemployment. Thus, economic factors are not fundamental to this phenomenon.

Conclusion

Immigration is an issue that keeps raising the pros and cons. For decades, global migration has grown more rapidly than population growth. In August 2015, tensions from the flood of refugee flows from the Middle East have grown to an extreme. This immigrant raid has shaken the European order and activated sudden political changes that support the political rights of the Germans. In the world of German politics itself split into two camps. The first faction assumed that the country needed immigrants, opposed by a second camp that rejected cultural differences between Germans and refugees. According to the first camp, the refugees created a positive climate in the economic sector.

In this paper, the author sees this anti-immigrant sentiment as a cultural panic, not an economic panic. Despite the 2005 German constitution policy that loosened citizenship status, the authors argue that this policy is not entirely accepted by disturbing German citizens about the meaning of identity and how people born elsewhere can become part of European society. The author considers that there is a reconstruction of German state identity that wants to be an open country in accepting change. Using the concept of Cosmopolitanism and Communitarianism, the authors conclude that the anti-immigrant response in Germany is proof that it is a form of reconstruction of German identity.

Reference


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Young Hijabers:

Orientations and Preferences toward Women Muslim Wear

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ABSTRACT
Muslim women’s clothing tend to concern about their lifestyle and fashion trend. This matter cause marketer need to comprehend the characteristic and profile of this segment. This study aims to explore the shopping orientation of young hijabers and their clusters based on shopping orientation, and their profile based on shopping orientation, brand and product preference, and demographic conditions. The data were collected using questionnaire distributed to 308 respondents of 20 to 35 year-old Muslim women who wear hijab, domiciled in Jabodetabek region, and have ever bought veil, long sleeve tops, dress, long pants, or long skirt within the past one year that were worn for casual hangouts. Hierarchical cluster, K-means cluster, one-way ANOVA, and crosstab, were employed for data analysis. Results showed that there are eight dimension of shopping orientation and three clusters of young hijabers namely trendy hijab shoppers, picky hijab shoppers, apathetic and simple hijab shoppers. This result showed that producer and marketer must concern about shopping orientation and develop product that align with hijaber’s shopping orientation. Further, researcher can use more individual characteristic variables, such as religiousity, value, and ideology to sharpening the analysis about hijabers.

Keywords: Brand preference; Hijaber; Product preference; Shopping orientation
1. INTRODUCTION

Hijab is a head covering that women’ muslim wear to cover their hair as required by religion. Decision to wear hijab has been increasingly recognized by Muslim women in Indonesia supported by a large number of Muslim populations. Indonesia is the country with the largest Muslim population in the world, about 13% of the world's Muslim (Pew Research Center's Forum, 2012). Large population of Muslims and awareness of hijab, impact the increasing number of Muslim women who decide to wear hijab and as the result, hijab become more popular in Indonesian (Latifah, 2014). Subsequently, this situation establish subculture of hijabers in Muslim.

In various shopping processes, including shopping for women's clothing, there is consumer value judgment that creates preference and increase intention to participate in shopping (Cronin et al., 2000; Dlodlo, 2014). Brand preference can also be an important factor that illustrate certain consumer behaviors, because perceptions toward particular brand can shape personal image when using clothing products (Choi et al., 2010). Hence, marketers must understand about consumer’s shopping acts called shopping lifestyle or shopping orientation (Gehrt et al., 2012).

Market segmentation is dividing the market into smaller buyer segments with different needs, characteristics, or behaviors that require a separate marketing strategy or mix (Armstrong et al, 2017). Segmentation is important for practitioners and academics in the field of marketing because it provide an understanding of consumer behavior, target customer profile, and brand/store positioning. For retailers, the information can lead to efficient and effective marketing strategies (Bahng et al., 2013). Reaching appropriate segment with appropriate product is the key to determine profit.

Demographic such as age and income, can also provide information to marketers about what is the consumer’s choices. Further, the product that their consume reflect their lifestyle that expressed through various activities, such as activities related to opinions on religion. When analyzed more deeply, fashion, hobbies, religion, etc. can describe activities, interests, and opinions. Hence, based on these information, marketers can create consumer profiles through the activities and patterns of consumers consumption (Solomon, 2014).

Nowadays, hijab is one of the religious symbols for Muslim women, introduced by the hijabers with the latest style in Indonesia that shifts the mindset of the veiled women that although they wear hijab, they can still look fashionable and not as simple as the previous concept (Hardiyanti, 2012). Compagnos (2012) in Latifah (2014) states that a community that is always warmly spoken is a contemporary hijab community like "hijabers" that creates a hooded trend in Indonesia. Latifah (2014) explained that sharing information among hijabers allows them to determine what style they are wearing which then reflects the dynamics of hijab use for hijabers: (1) fashionable hijabers, (2) ordinary hijabers, and (3) hijabers Syar'i.

Bahng et al (2013) had already identified 3 (three) clusters of students based on their clothing shopping orientation, namely apathetic price-forward shoppers, fashion-forward hedonic shoppers, and involved price-forward shoppers. But, their research not specific on hijab and hijabers. Their research was conducted in USA, where muslims are minority. According to Mohamed (2016), muslims in USA approximately 1% of total population. In Indonesia,
muslims are majority. As subculture differences, fashion trends could be different, especially young muslims profile. This study explore the cluster and profile of young hijabers in Indonesia, based on shopping orientation, product preferences, brand preference, and demographic variables. In the next section, this paper will elaborate more on literature review as the foundation to identify some factors to develop hijabers profiles. Then, it discusses the methodology adopted in this study and the discussion of result will be followed by the conclusion and, finally, a discussion on future research and research implications.

2. LITERATURE REVIEW

2.1 Consumer Culture Theory
Consumer Culture Theory is a family of theoretical perspectives that concern to dynamic relationship between consumer action, marketplace, and cultural meanings (Arnould and Thompson, 2005), and explores variety of meaning related to particular situations roles and relationships. CCT examines about how consumers rework and transform symbolic meaning in advertisement, brand, retail, or goods to reflect identity and lifestyles.

2.2 Shopping Orientation
Shopping orientation or shopping lifestyle is a consumer approach to shopping behavior. The basic premise of shopping orientation is consumers have many different approaches to shopping. Thus, it determines the variety of shopping styles raised by the individual and how the shopping style relates to purchase intention. Shopping orientation identify subject responses to AIO-related statements (activities, interests, and opinions) (Gehrt et al., 2012).

Some researchers explained various reasons why consumers shop (Babin et al, 1994; Bahng et al, 2013; Buttner et al, 2014; Seock dan Chen-Yu, 2007). When they want to buy certain products, they will gather information for upcoming buying decisions or get an overview of the latest trends, and they are different based on how they shop, select products, or process information (Buttner et al, 2014). Consumer approach in shopping can also be divided into experiential shopping orientation and task-focused shopping orientation. In experiential shopping orientation, consumers seek pleasure. While shopping with task-focused orientation, they see shopping as a task to be accomplished and aim to complete it as efficiently as possible (Buttner et al., 2014).

Babin et al. (1994) identified hedonic and utilitarian shopping orientation. Hedonic orientation related to fun and memorable shopping experience. In contrast, utilitarian orientation refers to more rational and process-oriented approach. Further, Bahng et al. (2013) explain about the characteristics of shopper based on their shopping orientations. Hedonic shoppers enjoy shopping and spend more time in the store. Utilitarian shoppers are goal-oriented, shopping is a task that must be completed accurately and efficiently. In online clothing shopping environment. Previously Seock and Bailey (2007) identified seven shopping orientation for students, namely shopping enjoyment, brand/fashion consciousness, price consciousness, shopping confidence, convenience/time consciousness, in-home shopping tendency, and brand/store loyalty.

2.2.1 Shopping Enjoyment
Shopping enjoyment is characterized as the personality or individual nature that arises from experiencing more enjoyable and quality shopping activities than other consumers (Bellenger and Korgaonkar, 1980; Odekerken-Schroder, DeWulf, and Schumacher, 2003 in Wong et al., 2012). Shopping enjoyment is associated with a short-lived emotional response, such as satisfaction, pleasure, and dominance (Dawson, Bloch, and Ridway, 1990; Koufaris, Kambil, and LaBarbera, 2001-2002 in Wong et al., 2012).

2.2.2 Shopping Apathy

Shopping can be said to be a major activity in leisure, but many people do not enjoy the shopping experience, which is called apathetic shoppers (Reid and Brown, 1996) so they have a tendency to be apathetic or indifferent to shopping Apathy.

2.2.3 Pursuing Fashion Trend

Consumers select alternatives in fashion trends by searching for the uniqueness that represents today's fashion atmosphere from a new point of view regarding design (Lin and Twu, 2012). It also illustrates the existence of consumer consciousness fashion, which is getting fun by looking for new things related to fashion (Cowart and Goldsmith, 2007).

2.2.4 Brand / store Value and Loyalty

Brand value is a concept that can not be clearly defined (Zeithaml, 1988 in Gabay, Moskowitz, Beckley, and Ashman, 2009). However, based on the Business Owner's Toolkit in Gabay et al. (2009), brand value is defined as the relationship between the quality of a product with its price. Generally, brand value is related to the influence of a brand in the marketing mix or brand name impact on reactions to other features in the marketing mix, such as its own product (Gabay et al., 2009). Brand value based on customer perception can be seen in two ways, either through attribute of product quality or brand image. Products must be designed, manufactured, and marketed in a way that is useful for creating a positive brand image with strong, positive, and unique associations that can make customers associate with brands that can form brand loyalty (Siram, Pradeep and Neelamegham 2006 in Majerova And Krizanova, 2015). Brand loyalty is seen as a deep commitment to subscribe to a product / service (Oliver, 1999 in Park and Kim, 2016).

2.2.5 Aesthetic Appearance and Subjective Norm

Aesthetic experience is a collection of emotions, images, ideas, feelings, sensations, and feelings (Mitias, 1982 in Park, 2013). When associated with the appearance of dress, the aesthetic experience of a garment reflects the internal process, the multisensoric attributes, the psychological aspects, and the sociocultural characteristics of the wearer.

Subjective norm refers to a person's perception of the opinions of others that are important to him or her related to what behaviors he should or should not do (Fishbein and Ajzen, 1975 in Son, Jin, and George, 2013). In other words, this dimension refers to a person's perception of the opinions of those who are important to him or her about behaviors that should or should not be demonstrated through the image and sensation of appearances depicting the psychological and cultural characteristics of the wearer (adapted from Fishbein and Ajzen, 1975 in Son et al., 2013; and Mitias, 1982; Fiore and DeLong, 1994 in Park, 2013).
2.2.6 Shopping and Fashion for Social Activities
Activity is divided into three categories: social, productive, and physical activity. However, not all types of activities in each category fall into one category only, but can also belong to other categories simultaneously (not mutually exclusive) (Niti, Yap, Kua, Tan, and Ng, 2008).

Social activities consist of participation in religious services, going to theaters, restaurants, or sporting events, outings, playing games, club activities, or other recreations. Productive activities consist of hobby activities, such as reading, making music, designing media programs, counting, painting, gardening, preparing food, shopping, volunteering without pay, working for pay, doing business or other paid work. Physical activity consists of regular physical exercise, such as fitness, walking, active exercise, swimming, or martial arts.

In other words, this dimension refers to shopping for fashion products for use in social activities, such as participation in religious services, going to theaters, restaurants, or sporting events, outings, playing games, club activities and recreational activities (adapted from Keels, 2012 and Niti et al., 2008).

In previous research, the dimensions used were shopping and fashion for school / work, but the dimensions were not used in this study. In this study, the dimensions used are shopping and fashion for social activities that are not used in previous research so that adjustments are needed to measure these dimensions, i.e. the use of leisurely travel context with friends / family / other (social activities) on each item of questionnaire that previously used the context on the campus (school / work).

2.2.7 Impression and Reputation
Lange, Lee, and Dai (2011) in Baka (2016) identify three dominant concepts or dimensions of reputation: known by others, known for something, and are generally favored. In order to have a reputation with these dimensions, a person forms an impression on others based on the brand of clothing they wear (Fennis and Pruyn, 2007 in Willems et al., 2012).

2.2.8 Price Consciousness
Price consciousness is the extent to which consumers only focus on buying / paying for a low price (Lichtenstein et al., 1993 in Konuk, 2015). Price-conscious shoppers are the ones who make sure that if a product's price is more expensive than the price they will pay, they will refrain from purchasing it. In addition, they will not pay for different product features if the price difference for the feature is too large (Lichtenstein, Bloch, and Black, 1988 in Campbell, DiPietro, and Remar, 2014). Jin and Sternquist (2004) in Konuk (2015) state that when consumers think of prices as a source they should sacrifice when buying, they tend to be price conscious and will shop in more than one store for the lowest price.

2.3 Product and Brand Preference
Consumers prefer products and brands with symbolic meanings that are consistent to their self concepts (Govers and Schoormans, 2005). The self-congruity theory suggests that consumers compare their self-concept with product-user images, in which product-user image is the image of a particular product’s user in general (Sirgy, 1982 in Govers and Schoormans, 2005 ).
Consumers prefer products that congruent between product images and their self-concept, or other users (Govers and Schoormans, 2005).

In a study by Howard and Kerin (2013) on the impact of brand preference due to surname brand preference. Surname brand preference is consumer preference for a brand that is stronger than any other brand for a particular product category or willingness to support the brand because the brand name congruent to family name. In other words, brand preference can refer to consumer's preference for a brand because the consumer assumes that the brand is stronger than any other brand for a particular product category.

For many consumers, brand preference can be an important factor explaining certain consumer behaviors, such as in choosing clothing, because perceptions of a particular brand can be congruent with the personal image of a person who uses particular clothing (Choi et al., 2010 ). Preference alteration to a brand illustrates the extent to which brand names contribute to market share and brand loyalty (Aaker, 1991), and the significance relationship between a particular brand and product preference (eg luxury goods) and a number of consumer attributes (Bahng et al., 2013).

3 METHODS

3.1 Samples

Population in this research are muslin that using hijab, with 20 – 35 years old of age which popularly known as Gen Y or Millenials. Moreover, their have been using long-sleeved tops, dress, trousers, or long skirts in-at least- one year when traveling casually. The informal context is used because in this activity hijabers are more free to wear the wat they want. There are 308 respondents, using purposive sampling, cross-sectional offline and online survey through Googledocs. The most frequent Muslim women's clothing to wear when traveling casually is the veil as well as blouse (58%). The majority of respondents aged 20 to 24 years old (67%), and students (52%). They purchase semi-premium brand (61%), veil types are square hoods (55%), T-shirts (28%), and trousers (77%). The largest source of funding of respondents to buy Muslim women's clothing mostly comes from parents (45%), followed by self income (43%).

3.2 Measurement and Data Analysis

The questionnaire consists of 31 questions with six-point likert scale regarding six research constructs: 31 items with six-point likert scale (Bahng et al, 2013), 1 item ordinal scla of Brand Preference (Howard and Kerin, 2012), 3 items nominal scale of Product Preferences (Govers dan Schoormans, 2005), 5 items nominal scale of demographic-psychographics (Bahng et al, 2013). Cross-tabulation, and multivariate analysis, such as factor analysis, cluster analysis, and anova are used by SPSS 22 to obtain the research objectives

4. RESULTS AND DISCUSSION

4.1 Validity and Reliability of Shopping Orientation

Pretest were held with 30 respondents to measure the validity and reliability of shopping orientation items. Through SPSS 22, the result demonstrated, only 29 items were valid with loading factors > 0.5 and Cronbach’s Alpha > 0.6. Exploratory factor analysis was used to measure validity and construct 8 dimension of shopping orientation : Brand/store value and loyalty, Pursuing fashion trend, Price consciousness, Fun and attractiveness, Subjective norms
of Appropriate appearance, Shopping enjoyment, Shopping apathy, and Flexibility of Fashion sense. The validity in main survey were also demonstrated, all 29 items were valid and reliable in all dimension of shopping orientation. There are 8 dimension of shopping orientation. Similar with Bahng et al (2013), but difference in item that explain the dimension.

4.2 Hijabers’ Cluster
Based on 8 dimension of shopping orientation, there are 3 clusters of young hijabers: (1) trendy hijab shoppers, (2) picky hijab shoppers, dan (3) apathetic and simple hijab shoppers (Table 1).

<table>
<thead>
<tr>
<th>Shopping Orientation Cluster’s Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Shopping Orientation Dimensions</strong></td>
</tr>
<tr>
<td>Brand/Store Value and Loyalty</td>
</tr>
<tr>
<td>Pursuing Fashion Trend</td>
</tr>
<tr>
<td>Price Consciousness</td>
</tr>
<tr>
<td>Fun and Attractiveness</td>
</tr>
<tr>
<td>Subjective Norm of Appropriate Appearance</td>
</tr>
<tr>
<td>Shopping Enjoyment</td>
</tr>
<tr>
<td>Shopping Apathy</td>
</tr>
<tr>
<td>Flexibility of Fashion Sense</td>
</tr>
</tbody>
</table>

The profile will be enrich by analyze each clusters based on demographic and psychographic variables (Table 2).

Table 2 Demographic-Psychographic Cluster’s Profile

<table>
<thead>
<tr>
<th>Demographic-Psychographic</th>
<th>Cluster 1 (N=79)</th>
<th>Cluster 2 (N=143)</th>
<th>Cluster 3 (N=86)</th>
<th>Chi Square Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 20-24</td>
<td>53</td>
<td>99</td>
<td>55</td>
<td>0.753</td>
</tr>
<tr>
<td>25-29</td>
<td>12</td>
<td>26</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>30-35</td>
<td>14</td>
<td>18</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>79</td>
<td>143</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>Students</td>
<td>45</td>
<td>76</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Entrepreneurs</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Government Employee</td>
<td>4</td>
<td>7</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Private company employee</td>
<td>14</td>
<td>31</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Housewives</td>
<td>9</td>
<td>8</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Fresh graduate</td>
<td>4</td>
<td>7</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>1</td>
<td>12</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>79</td>
<td>143</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>Source of budget for fashion</td>
<td>31</td>
<td>60</td>
<td>42</td>
<td>0.490</td>
</tr>
<tr>
<td>own</td>
<td>49,4%</td>
<td>47,6%</td>
<td>47,7%</td>
<td></td>
</tr>
<tr>
<td>parents</td>
<td>39</td>
<td>68</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>husband</td>
<td>9</td>
<td>15</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>79</td>
<td>143</td>
<td>86</td>
<td></td>
</tr>
</tbody>
</table>
4.2.1  **Trendy Hijab Shoppers**

The cluster consists of 79 young hijabers dominated by student hijabers (57%), aged 20 - 24 years (67.1%). The majority of hijabers in this cluster buy Muslim women's clothing with a source of funds from parents (49.4%). The brands most often purchased for use when traveling casually by hijabers in this cluster are semi-premium brands (63.3%). Cluster 1 has an average monthly spending variable to buy the highest female Muslim fashion (IDR 483,734) compared to other clusters. The most popular veil type of this cluster is square hood (54.4%), followed by pashmina (41.8%). The most popular clothes for use when traveling casually by this cluster are long sleeved shirts (30.4%) and trousers (88.6%).

This cluster contains the most happy and non-apathetic respondents that has orientation of fashion shopping, most up-to-date trends, most wanting to attract the attention of others through their fashionable appearance, and at least picky so it's quiet easy for them to get clothes which they prefer. However, these clusters most consider prices such as looking for sale or discount or price comparison and have the highest loyalty to a particular brand or store between the three clusters. Therefore, it can be said that they really enjoy shopping, but they are trying to get a product that is cheap.

4.2.2  **Picky Hijab Shoppers**

This cluster consists of 143 young hijabers, which is the largest number of members among the three young hijabers clusters. This cluster is dominated by student hijabers (53.1%), aged 20-24 years (69.2%). The majority of hijabers in this cluster buy Muslim women's clothing with a source of funds from parents (47.6%). The most commonly purchased brand to wear while traveling by hijabers in this cluster is the semi-premium brand (62.9%). Cluster 2 ranks second in the average expenditure variable per month to buy female Muslim fashion (IDR 415, 370). The most popular type of scarf favored by this cluster is square hood (56.6%) followed by...
pashmina in second (35%). The most popular clothes for use when traveling casually are long-sleeved blouses (29.4%) and trousers (74.8%).

For some dimensions of shopping orientation, such as shopping enjoyment, shopping apathy, price consciousness, brand/store value and loyalty, fashion pursuing trend, fun and attractiveness, and subjective norms of appearance, this cluster obtains the second highest average order that this cluster belongs to the "moderate" category among the three young hijabers clusters. However, this cluster is at least flexible when buying clothes. Thus, it can be said that these cluster hijabers expect a very limited range of Muslim women in terms of models, motifs or sizes so that they have no difficulty in choosing the appropriate clothing. Moreover, since they do not make as much effort to get products as cheaply as possible, they consider the value they will get from a product, regardless of whether the price is low or high.

4.2.3. Apathetic and Simple Hijab Shoppers
The cluster consisted of 86 young hijabers dominated by student hijabers (46.5%), aged 20-24 years (64%). The majority of hijabers in this cluster buy Muslim women's clothing with a source of funds from self-income (47.7%). The most commonly purchased brand to wear while traveling by hijabers in this cluster is the semi-premium brand (55.8%). Cluster 3 has an average monthly spending variable to buy the lowest female Muslim fashion (IDR 269,186).
The most favored type of scarf by this cluster is a square hood (51.2%), followed by khimar in second (24.4%). The most popular clothes for use when traveling casually by this cluster are long sleeved shirts (33.7%) trousers (68.6%).

This cluster members the most apathetic respondents, at least considering the price, at least paying attention to how to look decent and attractive, at least trying to up-to-date with the trend, and having the lowest loyalty to a particular brand or store in between the three clusters. In terms of flexibility when shopping for female Muslim fashion, they have the second highest average so it can be said that they are not very choosy. Therefore, it can be said that they will be apathetic when they are exposed to women's clothing shopping activities, but if they find a product that suits what they want, they tend to be interested in buying with little thought of the price. Based on the above characteristics, it can be said that hijabers in this cluster buy women moslem dress on the basis of comfort and simplicity in appearance when traveling casually, in accordance with its basic function as a Muslim dress or hijab.

5. CONCLUSION
There are 8 dimension of shopping orientation in this study: Brand/store value and loyalty, Pursuing fashion trend, Price consciousness, Fun and attractiveness, Subjective norms of Appropriate appearance, Shopping enjoyment, Shopping apathy, and Flexibility of Fashion sense. This result is still similar with previous research, namely eight dimensions. However, the item in each cluster is slightly different. Based on those dimension, there are 3 clusters of young hijabers: trendy hijab shoppers, picky hijab shoppers, and apathetic and simple hijab shoppers.
Pursuing fashion trends is the most distinguishing dimensions. This is because the trend is part of the consumer environment which then becomes a strong social stimulus for consumers. Based on the reciprocal relationship in The Wheel of Consumer Analysis (Peter and Olson, 2010), the strong influence of the environment in the form of trends can affect behavior and affective-cognitive consumers responses. In addition, fashion is considered to be part of a unique cycle of reflection of social, cultural, and environmental characteristics of a particular time and geographic location which then plays an important role in complementing personal image (Azuma and Fernie, 2003).

In general, the type of veil that is still a favorite of young hijabers is the square veil. Therefore, women's clothing business should offer more variety of motifs, colors, and materials. In addition, women's clothing business also can offer more long-sleeved shirts and blouses with a variety of motifs, colors, and materials because in general these two types of clothes are still the most favored by young hijabers because of its function is quite flexible when traveling, but with cheaper price.

Descriptive analysis of brand/store value and loyalty is low. This result demonstrated—general-young hijabers often switch brands or stores to obtain a suitable woman moslem clothing. Therefore, to increase brand loyalty and brand value, women's clothing business should be more creative in offering uniqueness or competitive advantage when create and deliver its products. The uniqueness can be shown through product variation, customer service, benefit, or promotion. This should be done to increase product value and social image.

Although focus on Muslim clothes, this study does not concern about religious variables to profiling the hijabers. This result has limited in reflect product preferences that concern to internal consumers such as some variable related to religion as sub culture. Future research should include some religion variables to enrich Islamic aspects in customers profiling.

5. REFERENCES


CHILD LABOR AND HOUSEHOLD WEALTH IN INDONESIA

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ABSTRACT

Child labor is an important policy agenda in developing economies. In particular, whether child labor and household wealth have a positive or negative relationship has been discussed in the contexts of “wealth paradox” and “luxury axiom.” This study discusses such an issue by empirically investigating how household wealth relates to child labor with Indonesian data taken from Indonesian Family Life Survey (IFLS) the fifth wave in 2014. In this paper, we divide household wealth into three categories: farm-business, non-farm business, and non-business assets. The first two assets are related to business, while the last one is related to non-business. This study applies probit and Tobit, models. Our findings are as follows. First, child labor is positively associated with household’s farm-business assets in rural and urban areas, which supports the argument of wealth paradox. Imperfect labor markets in the agriculture sector discourage farmers to hire the non-household labor. Second, the results also show a positive relationship between child labor and household’s non-farm business assets in urban areas, which supports the argument of wealth paradox. Non-farm business is likely to encourage households to hire non-household labor in urban areas. Third, in sharp contrast to the previous results of household’s business assets, the analysis presents that child labor is negatively linked with household’s non-business assets in urban areas, supporting the argument of luxury axiom. Our analysis emphasizes that which argument, wealth paradox or luxury axiom, explains actual conditions of child labor depends on types of household’s assets and regional characteristics. We also discuss the role of household wealth in determining two types of child labor, domestic labor, and paid labor.

Keywords: child labor; luxury axiom, wealth paradox; Indonesia.

1. INTRODUCTION

Child labor is a global issue. Many of children who worked are come from low-income family and work to pay their family and their education. Based on International Labor Organization (ILO) data in 2012, there are 168 million children who become children labor. 78 million child workers came from Asia Countries and Pacific Countries. ILO also reported that in 2012, 58.6 % of the child labor working in agriculture sector while it was 60 % in 2008. In 2012, the number of boys was bigger than girls that involved in child labor. (Office, 2013). Like other developing countries, Indonesia also faced child labor problems. In Indonesia, based on 2013 data, there were 3.6 million working children (UNESCO Institute for Statistics, 2015).
Furthermore, figure 3 describes 61.6% worked in agriculture sectors, 26.5% in the service industry and 12% in industry sectors. Moreover, they dominantly found in the rural area.

Traditionally, many economists believed that child labor as result of income poverty. Using Bangladesh data, Amin, Quayes, and Rives (2004) found that family’s poverty increases the probability of children to work. Specifically, some research tried to describe the relationship between child labor and household farm wealth. This theory supported the hypothesis that child labor as the impact of poverty. Basu and Van (1998) found that child labor would decrease as household resources increase, a result of “luxury axiom.” An increase in wealth encourages the family to increase their consumption in normal goods, including child leisure and schooling. This theory was supported by the positive correlation between child labor and poverty. Moreover, Bandara et al. (2015) mentioned that the relationship between asset and child labor is negative. It means that asset wealth can reduce child labor.

Meanwhile, several economists found the different result for the correlation between household asset and child labor. The results show the positive correlation between asset wealth and child labor, namely “wealth paradox.” The founder of “wealth paradox” are Bhalotra and Heady (2003) that found children with rich farm asset tend to work more than children with the poor asset. Moreover, Kambhampati and Rajan (2006), based on research in India showed that an increasing farmland would increase the child labor participation. Dumas (2007) mentioned that parents with land area thought child leisure is luxury good. In result, parents will force their child to work in farmland because they cannot hire the non-household labor and it will cause higher income loss if they did not farm the land. Furthermore, Kruger (2007) showed using Brazil’s coffee-producing areas data that wealth positively affected child labor.

This article evaluates the impact of household wealth in the family decided to send their child to the labor market. Commonly, researcher investigates the impact of farm asset on child labor. In this paper, we also try to study the impact of the non-farm and non-business asset on child labor. Furthermore, this article attempts to investigate whether rural or urban location gave different result in child labor. Moreover, It also measured the impact household asset on domestic and non-paid child labor.

2. METHODS

2.1. Data

In this study, children are defined as a child with age from 5-14 years old. This definition follows the ILO (1973) definition of child labor which mentioned the minimum age for employment is 15 years old, is the minimum age of the completion of compulsory schooling. This research use cross-section data based on IFLS fifth wave (2014). This study observed 10,074 children age 5-14 years old and 7,226 households. From 10,074 children, 3,039 children are working (30.17%) and 7,035 children are not working (69.83%). Moreover, 4,188 children live in rural area with proportion 2,371 children are not working (65.21%) and 1,457 children are working (34.79%). Furthermore, 5,886 children, who live in urban have a smaller proportion of working children only 26.88 percent (1,582 children) compared to a rural area.

2.2. Methodology

To solve the four main issues, the empirical model is written:

\[ Y_{ih} = \beta_0 + \beta_2 \text{Asset}_h + \sum \gamma_k W_{i,k} + \sum \beta_m Z_{m,h} + \epsilon_{ih} \]
where Y is child labor’s dummy variable/child labor working hours, i is children, h is household, Asset measure the log of the total farm, non-farm and non-business asset per capita by household, W contains a set of controls using children characteristics, and Z contains a set of controls using household characteristics.

This research evaluates the impacts of household wealth on child labor. There are six measurements of child labor which will be the primary focus of this research. Firstly, the dependent variable is Dummy Child Labor (DW) which is the dummy variables of child labor. It will be 1 if the children enter the labor market, 0 if otherwise. Secondly, the dependent variable is Dummy Domestic Child Labor (IDW) which is the dummy variables of child labor in the farm or non-farm family business. It will be 1 if the children involved in the farm or non-farm family business, 0 if they are not involved. Thirdly, the dependent variable is Dummy Paid Child Labor (ODW) which is the dummy variables for child labor outside their family business. It will be 1 if the children enter the non-family business labor market, 0 if they are not entered. Furthermore, the fourth dependent variable is Children’s Total Working Hour (TTW) which is the summation of total working hours in a week. The fifth dependent variable is Domestic Children’s Total Working Hour (INTW) that is the summation of total working hours in a week when the children are working on the farm or non-farm family business. The last dependent variable is Paid Children’s Total Working Hour (OUTTW), is the summation of total working hours in a week when children are working outside the family business.

To answer the research question, this study uses three primary variables in the model. First, the main variable is Household Farm Asset (HFA) which is the log value of total farm asset divided by household size. The second household characteristic is Household Non-Farm Business Asset (HNFA) that is the log value of total non-farm asset divided by household size. Thirdly, we use Household Non-Business Asset (HNBA), which is the log value of the total asset that not used in the farm and non-farm business divided by household size.

To control the child labor, this research uses control variables from children characteristics and household characteristics. The children characteristic used in the model are children sex and children age. Children Sex (CSEX) is the dummy variable for children gender. The value will be 1 if the children gender is male, 0 if the children sex is female. In general, girls are more likely involved in economic activity rather than boys. The reason is girls are less likely to participate in schooling, and they are more likely involved in household chores than boys. Children Age (CAGE) is the children characteristic that represent the age of children. The value will be a range of 5 to 14. It is expected that the child labor will increase as children get older and decrease when they reach some age.

We use eleven household head characteristics in the model. Household Head Gender (HHGE) is the dummy variable for household head sex. It will be 1 if the household head gender is male and 0 if the household gender is female. We also use Household Head Age Square (HAGE2). It expected will be U-shaped. Household Farmer (HFARM) that is a dummy variable for parent’s job. The value would be 1 if the parents worked as the farmer, 0 otherwise. Moreover, the farm family also believed working would increase the children’s skill for better future. Household Borrowing Money (HBOR) is the dummy variable for household borrowing the money. It would value 1 if any member of household borrowed money and it will 0 if the household did not borrow money in the last 12 month. It expected that if household borrows the money, it will increase the probability of child labor. Sixthly, the variable is Household Number of Children (HNCH) which is the total number of children in the household. Moreover, this paper also uses Household Number of Adult (HNAD), which is the total number of a household member with age more than 17 years old. A higher number of an adult in the family might reduce the probability of child labor because of the source of income from the adult increase. We also use Household Number of Adult Square (HNAD2) that is the total number of family member with age more than 17 years old times the total number of the family member with age more than 17
years old. The eighth household characteristic is Household Parents Both Alive (HPBA), which is the dummy variable for parents that both are alive. It will value 1 if both parents are alive and it will value 0 if only father or mother is alive. We expected that if a family with both parents alive would have a lower probability to send their children to the labor market. Furthermore, we include Household Parents Only Mother Alive (HMAL) as household characteristics. Household Parents Only Mother Alive (HMAL) is the dummy variables for parents that the only mother is alive. It will value 1 if the only mother is alive and it will value 0 if the only father or both parents are alive. We expected that single parent with the only mother could increase the probability of child labor because income from working child will help the household to overcome income problem. The last household characteristic variable is Household Location (HRURAL), which is the dummy location whether children live in rural or urban. It will value 1 if the children live in rural area, 0 otherwise. Kruger (2007) found that child labor significantly correlated with rural areas.

In the first step of the research, we apply the Probit Model, since the dependent variable is child labor dummy. In the second phase of the analysis, we use the Tobit Model, using children’s total working hours. These two methods are commonly used in child labor research.

3. RESULTS AND DISCUSSION

3.1. Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>Full Sample</th>
<th>Rural</th>
<th>Urban</th>
<th>Differe nce</th>
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<td></td>
<td>Mean</td>
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<td>Mean</td>
<td>Std. Dev.</td>
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<td>0.215</td>
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<td>16.666</td>
<td>1.727</td>
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<td></td>
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<td>Household Farm Asset (HFA)</td>
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<td>10.190</td>
<td>7.524</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Household Non-Farm Business Asset (HNFA)</td>
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<td>6.335</td>
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<td>5.979</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Household Non-Business Asset (HNBA)</td>
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<td>1.991</td>
<td>16.161</td>
<td>1.957</td>
</tr>
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<td></td>
<td></td>
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<td></td>
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<tr>
<td>Children Sex (CSEX)</td>
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<td>0.500</td>
<td>0.502</td>
<td>0.500</td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td>Children Age (CAGE)</td>
<td>9.355</td>
<td>2.862</td>
<td>9.383</td>
<td>2.847</td>
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Table 1. Summary of statistics

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<th>Variable</th>
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<th>Urban</th>
</tr>
</thead>
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<tr>
<td></td>
<td>Probit</td>
<td>Tobit</td>
<td>Probit</td>
</tr>
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<td>Children Age Square (CAGE2)</td>
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<td>Household Head Gender (HHGE)</td>
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<td>0.878</td>
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<td>43.305</td>
<td>10.809</td>
<td>43.181</td>
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<td>1985.8</td>
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<td>Household Farmer (HFARM)</td>
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</tr>
<tr>
<td>Household Borrowing Money (HBOR)</td>
<td>0.330</td>
<td>0.470</td>
<td>0.291</td>
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<tr>
<td>Household Number of Children (HNCH)</td>
<td>2.256</td>
<td>1.176</td>
<td>2.176</td>
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<tr>
<td>Household Number of Adult (HNAD)</td>
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<td>0.549</td>
<td>2.000</td>
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<tr>
<td>Household Number of Adult Square (HNAD2)</td>
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<td>4.299</td>
</tr>
<tr>
<td>Household Parents Both Alive (HPBA)</td>
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<td>Household Parents Only Mother Alive (HMAL)</td>
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<tr>
<td>Household Location (HRURAL)</td>
<td>0.416</td>
<td>0.493</td>
<td>-</td>
</tr>
<tr>
<td>Household Chronic Disease (HHHCD)</td>
<td>0.562</td>
<td>0.496</td>
<td>0.506</td>
</tr>
</tbody>
</table>

Number of Observations | 10,074 | 4,188 | 5,886

3.2. Child Labor and Household Wealth

<table>
<thead>
<tr>
<th>Variable</th>
<th>Full Sample</th>
<th>Rural</th>
<th>Urban</th>
</tr>
</thead>
<tbody>
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<td></td>
<td>Probit</td>
<td>Tobit</td>
<td>Probit</td>
</tr>
<tr>
<td>HTA</td>
<td>0.005</td>
<td>0.022</td>
<td>0.033**</td>
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<tr>
<td></td>
<td>(0.008)</td>
<td>(0.090)</td>
<td>(0.014)</td>
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<tr>
<td>Observations</td>
<td>10,074</td>
<td>4,188</td>
<td>5,886</td>
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</tbody>
</table>

Notes: (1) The dependent variable in probit models is the child labor dummy. (2) The dependent variable in Tobit models is child labor working hours. (3) Robust standard errors in parentheses. (4) *** p<0.01, ** p<0.05, * p<0.1.

Table 2. Estimation results household wealth
Table 2 shows the correlation between child labor and the total household wealth. The result shows that child labor and the total household wealth is only significantly positive in the rural area. The result using total household wealth still creates several questions about the condition of child labor whether it only supports the “wealth paradox” or it also supports the “luxury axiom” theory. This result becomes the motivation for the author to specify the household wealth into farm asset, non-farm asset, and nonbusiness asset. The author also uses the full sample, the rural and the urban sample to get a more detailed result.

### 3.3. Child Labor, Farm Wealth, Non-Farm Wealth and Nonbusiness Wealth

<table>
<thead>
<tr>
<th></th>
<th>Full Sample Probit</th>
<th>Toby</th>
<th>Rural Probit</th>
<th>Toby</th>
<th>Urban Probit</th>
<th>Toby</th>
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</thead>
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<tr>
<td>HFA</td>
<td>0.010***</td>
<td>0.114***</td>
<td>0.012***</td>
<td>0.132***</td>
<td>0.007**</td>
<td>0.100***</td>
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<tr>
<td></td>
<td>(0.002)</td>
<td>(0.025)</td>
<td>(0.003)</td>
<td>(0.037)</td>
<td>(0.003)</td>
<td>(0.035)</td>
</tr>
<tr>
<td>HNFA</td>
<td>0.005**</td>
<td>0.066**</td>
<td>0.000</td>
<td>0.064</td>
<td>0.00782***</td>
<td>0.071**</td>
</tr>
<tr>
<td></td>
<td>(0.002)</td>
<td>(0.026)</td>
<td>(0.004)</td>
<td>(0.045)</td>
<td>(0.003)</td>
<td>(0.032)</td>
</tr>
<tr>
<td>HNBA</td>
<td>-0.012</td>
<td>-0.184**</td>
<td>0.010</td>
<td>0.065</td>
<td>-0.0244**</td>
<td>0.337***</td>
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<tr>
<td></td>
<td>(0.008)</td>
<td>(0.081)</td>
<td>(0.013)</td>
<td>(0.127)</td>
<td>(0.010)</td>
<td>(0.109)</td>
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<td>CSEX</td>
<td>-0.473**</td>
<td>-4.838***</td>
<td>-0.514***</td>
<td>-4.937***</td>
<td>-0.453**</td>
<td>4.776***</td>
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<tr>
<td></td>
<td>(0.029)</td>
<td>(0.343)</td>
<td>(0.044)</td>
<td>(0.503)</td>
<td>(0.038)</td>
<td>(0.466)</td>
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<tr>
<td>CAGE</td>
<td>0.394***</td>
<td>2.760***</td>
<td>0.479***</td>
<td>3.155***</td>
<td>0.319***</td>
<td>2.276***</td>
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<tr>
<td></td>
<td>(0.039)</td>
<td>(0.444)</td>
<td>(0.061)</td>
<td>(0.681)</td>
<td>(0.051)</td>
<td>(0.580)</td>
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<tr>
<td>CAGE2</td>
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<td>-0.041*</td>
<td>-0.016***</td>
<td>-0.050</td>
<td>-0.010***</td>
<td>-0.025</td>
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<tr>
<td></td>
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<td>(0.003)</td>
<td>(0.035)</td>
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<td>(1.167)</td>
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<td>(0.060)</td>
<td>(0.627)</td>
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<td>(1.024)</td>
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<tr>
<td></td>
<td>(0.031)</td>
<td>(0.351)</td>
<td>(0.049)</td>
<td>(0.539)</td>
<td>(0.040)</td>
<td>(0.460)</td>
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<td>0.055**</td>
<td>0.816***</td>
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<td>(1.625)</td>
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<td>(1.538)</td>
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<td>(2.062)</td>
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<td>-</td>
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<td>Observations</td>
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<td>10,074</td>
<td>4,188</td>
<td>4,188</td>
<td>5,886</td>
<td>5,886</td>
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<tr>
<td>Log Pseudolikelihood</td>
<td>-5220.063</td>
<td>14598.717</td>
<td>-2219.700</td>
<td>-6808.594</td>
<td>-2950.450</td>
<td>7740.247</td>
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<td>Pseudo R-square</td>
<td>0.154</td>
<td>0.065</td>
<td>0.180</td>
<td>0.071</td>
<td>0.139</td>
<td>0.062</td>
</tr>
</tbody>
</table>

Notes: (1) The dependent variable in probit models is the child labor dummy. (2) The dependent variable in Tobit models is child labor working hours. (3) Robust standard errors in parentheses. (4) *** p<0.01, ** p<0.05, * p<0.1.

Table 3. Estimation results

The first and second columns in Table 3 shows the estimated results of Probit and Tobit model, respectively. The coefficient on household farm asset (HFA) and household non-farm asset (HNFA) is significantly positive. The positive relationship between child labor dummy or child labor working hours and household farm asset (HFA) or household non-farm asset (HNFA) shows that child labor in Indonesia has “wealth paradox” paradigm. This finding also implies that in Indonesian agriculture sector, there is imperfect labor market. The farm household cannot hire the non-household labor, and they exploit their children in the agricultural land. Moreover, the imperfect labor market also occurs in the non-agriculture sector where the non-farm household cannot afford to hire the non-household labor and use their children to help their business. The positive relationship is contradicted with “luxury axiom” hypothesis published by Basu and Van (1998). On the other hand, the positive correlation between child
labor and the household farm or non-farm asset supported the previous research conducted by Bhalotra and Heidy (2003), Kambhampati and Rajan (2006), Dumas (2007) and Kruger (2007). Meanwhile, the correlation between the child labor working hour and the household non-business asset is negatively significant. On this finding, the negative correlation supports the “luxury axiom” hypothesis published by Basu and Van (1998). It means that child labor will be decreased if the nonbusiness asset increases. The non-business asset can reflect the income from sources other than child labor which means child labor will only occur when the income is very low.

The third and fourth columns in Table 3 shows the estimated results of probit and logit model, respectively. The relationship between household farm asset and child labor; dummy variable and working hour, is a significantly positive correlation. This finding is consistent with the full sample results that show “wealth paradox” in Indonesia. Meanwhile, the relationship between child labor and non-farm asset or non-business asset is not significant. The fifth and sixth columns in Table 3 shows the estimated results of probit and logit model, respectively. The correlation between child labor and household farm asset in urban is significantly positive. The relationship between child labor and the household non-farm asset is also significantly positive. These two findings support strong evidence “wealth paradox” in and proved that there is imperfect labor market in Indonesian. Meanwhile, the correlation between child labor and the nonbusiness asset is negatively significant which may support the “luxury axiom” hypothesis.

From the results in three different samples, we can assume that child labor is positively associated with farm business asset which may support wealth paradox theory. This relationship is more substantial in the rural area than in the urban area. Moreover, child labor is also positively correlated with non-farm business asset only in the urban area that supports wealth paradox hypothesis. Conversely, child labor is negatively associated with the nonbusiness asset in the urban area which may support luxury axiom theory.

### 3.4. Domestic and Paid Child Labor

<table>
<thead>
<tr>
<th></th>
<th>Domestic</th>
<th>Paid</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Probit</td>
<td>Tobit</td>
</tr>
<tr>
<td>HFA</td>
<td>0.010***</td>
<td>0.115***</td>
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<tr>
<td></td>
<td>(0.002)</td>
<td>(0.023)</td>
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<tr>
<td>HNFA</td>
<td>0.005**</td>
<td>0.075***</td>
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<td>(0.002)</td>
<td>(0.025)</td>
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<tr>
<td>HNBA</td>
<td>-0.009</td>
<td>-0.124*</td>
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<tr>
<td></td>
<td>(0.008)</td>
<td>(0.075)</td>
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</tbody>
</table>
Notes: (1) The dependent variable in probit models is the child labor dummy. (2) The dependent variable in Tobit models is child labor working hours. (3) Robust standard errors in parentheses. (4) *** p<0.01, ** p<0.05, * p<0.1.

### Table 4. Estimation results full sample (Domestic and paid child labor)

The estimation result shows that the correlation between domestic child labor and household farm asset is significantly positive, but the relationship between paid child labor and family farm asset is not significant in full sample. This finding supports the previous finding that parents use their kids as domestic child labor because they cannot afford to pay the nonhousehold labor. This result also supports the “wealth paradox” theory that indicated there is imperfect labor market. Moreover, the result also shows that the significant positive correlation between domestic child labor and household non-farm asset. This finding also supports the previous finding that mentioned the non-farm family business use their children as domestic child labor because they do not have enough money to hire nonhousehold labor. This result also supports the “wealth paradox” hypothesis. On the other hand, the paid child labor is not significant to the non-business asset. Moreover, the paid child labor is a significantly negative correlation with the nonbusiness asset. This finding supports the “luxury axiom” hypothesis.

<table>
<thead>
<tr>
<th></th>
<th>Rural Sample</th>
<th>Urban Sample</th>
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<tbody>
<tr>
<td></td>
<td>Domestic</td>
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<tr>
<td></td>
<td>Probit</td>
<td>Tobit</td>
</tr>
<tr>
<td></td>
<td>Probit</td>
<td>Tobit</td>
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<tr>
<td>HFA</td>
<td>0.012*</td>
<td>0.135*</td>
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<tr>
<td></td>
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<td>**</td>
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<tr>
<td></td>
<td>(0.003)</td>
<td>(0.034)</td>
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<tr>
<td>HNFA</td>
<td>0.000</td>
<td>0.078*</td>
</tr>
<tr>
<td></td>
<td>(0.013)</td>
<td>(0.042)</td>
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<tr>
<td></td>
<td>0.008*</td>
<td>0.077*</td>
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<tr>
<td></td>
<td>(0.004)</td>
<td>(0.042)</td>
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<tr>
<td>HNBA</td>
<td>0.012</td>
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<td></td>
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<td>(0.119)</td>
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<tr>
<td></td>
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<td>Observations</td>
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<tr>
<td>Log</td>
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<tr>
<td>Pseudolikeliho</td>
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<td>6622.0</td>
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<td>od</td>
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<td>68</td>
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<td>Pseudo R-</td>
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</table>

Notes: (1) The dependent variable in probit models is the child labor dummy. (2) The dependent variable in Tobit models is child labor working hours. (3) Robust standard errors in parentheses. (4) *** p<0.01, ** p<0.05, * p<0.1.
Table 5. Estimation results rural and urban sample (Domestic and paid child labor)

Table 5 shows the result in the rural and urban area. The correlation between domestic child labor and household farm asset is significantly positive in the rural and urban while the non-paid child labor is not significant. This result supports the previous finding that consistent with “wealth paradox” hypothesis. This finding also indicates that there is imperfect labor market in agriculture family in Indonesia because they cannot pay the nonhousehold labor and use their children to work in their farmland. Moreover, the relationship between domestic child labor and the non-farm asset is significantly positive in the urban area. This result clarifies the previous finding that supports “wealth paradox.” The non-farm family business in Indonesia also uses their children as domestic child labor in their non-farm business because they cannot afford to hire the nonhousehold labor. The other possible explanation that the non-farm family business gain more profit because they might not pay their children as labor. Furthermore, the paid child labor is significantly negative with the nonbusiness asset in the rural and urban while the domestic child labor is significantly negative only in the urban. This result also confirmed the previous finding that supports “luxury axiom” theory. It means that the nonbusiness asset would reduce the probability of paid child labor in rural and urban while it only reduces the domestic child labor in the urban.

4. CONCLUSION

This paper has examined the impact of the household asset on child labor suing IFLS data wave 5th. Our investigations considered the “luxury axiom” and “wealth paradox” hypothesis to examine the child labor in Indonesia. There is a significant difference between rural and urban. Our results for full sample, rural area and urban area show the significant and positive relationship between child labor and household farm asset, which may support the “wealth paradox” hypothesis. However, this relationship is more substantial in the rural area. The significantly positive correlation between child labor and household farm asset is consistent with the other finding. It shows significantly positively associated with domestic child labor and family farm asset. This result assumes that there is imperfect labor market in Indonesian agriculture that farmer cannot pay the non-household labor and use their children as domestic labor. Moreover, the result for urban area displays the significant and positive relationship between child labor and household non-farm asset, which may support the “wealth paradox” hypothesis. Furthermore, the “wealth paradox” hypothesis is also consistent with the results using domestic child labor. The result shows that there is a significant positive correlation between domestic child labor and household non-farm asset. It means that in the urban area, the imperfect labor market occurs in farm and non-farm business. Parents cannot pay the non-household labor and exploit their children as free labor. The result in a rural area failed to give clear evidence. Meanwhile, the result for urban area shows the significant negative correlation between child labor and household non-business asset, which may support “luxury axiom” hypothesis. The result in the rural area failed to give clear evidence. It also has a significant correlation in the boy’s sample. From the result in urban, the non-paid and paid child labor are a significantly negative correlation with the nonbusiness household asset which means an increase of the nonbusiness asset will reduce the probability of child labor. It means that wealthy family who presents by higher non-business asset will not send their children to labor market because they already have enough income for their family.

From the results of this research, we can conclude that child labor in Indonesia stems partly from households’ ownership of the farm and non-farm business assets, including agriculture
machinery. To reduce child labor in the agricultural household, the Ministry of Agriculture in Indonesia should promote the formation of farm cooperatives or unions which enable the members to share farm business assets (separation of the ownership). This recommendation will not increase the agricultural asset but will help the farmer to use agriculture machinery. Moreover, Indonesian government should provide the training purpose for parents about agricultural techniques that offer alternative methods rather than the use of child labor. This training can reduce the use of children as labor in a farm field.

5. REFERENCES

IMPACT OF IMPLEMENTATION TAX GUIDELINE AS AN EFFORT TO INCREASE TAX COMPLIANCE CASE STUDY IN INDONESIA

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¹ Tax Administration Laboratory, Vocational Education Program
Universitas Indonesia, 16424, Indonesia

ABSTRACT

Indonesia's tax system embraces a self-assessment system in which the government grants freedom to registered taxpayers to report, deposit, and pay taxes in accordance with the General Provisions of the Tax Law in complete, correct and clear. With the tax system in self-assessment system tendency taxpayers to avoid the tax payments. Various ways by taxpayers to avoid tax obligations, or even intentionally to report taxes incorrectly. PT.XYZ is a company that has been active for more than 40 years in Indonesia as one of production and export bases in Asia Pacific region. PT.XYZ continues to contribute to the development of the Indonesian automotive industry, through strengthening international competitiveness. PT.XYZ seeks to improve internal and external controls in order to achieve goals to build compliance toward a tax-conscious society. One of the efforts of PT.XYZ is to create a special strategy to diagnose from any internal or external systems that transact with PT.XYZ whether in accordance with the rules and general provisions of taxation. This study describes the impact of implementation tax guideline as an effort to increase tax compliance. Research conducted using data from PT XYZ. The processed data is about activities and transactions that belong to certain types of tax objects, as well as the tax bases, and tariffs imposed under the applicable provisions of tax laws. As a result, the implementation of tax guideline has been proven to help PT. XYZ in improving compliance because it has been able to overcome the problems of tax administration issues associated with the vendor.

Keywords: Income Tax Article 22; Income Tax Article 23; Tax Compliance; Tax Guideline; Value Added Tax

1. INTRODUCTION

Indonesia's tax system embraces a self-assessment system in which the government gives freedom to registered taxpayers to report, deposit and pay taxes in accordance with the General Provisions of the Tax Law in complete, correct and clear. With the tax system in self-assessment system tendency taxpayers to avoid the tax payments. Various ways by the taxpayer to avoid tax obligations, or even intentionally to report taxes incorrectly. One example of the mode of tax crime that deliberately made by the taxpayer to avoid the tax obligation that is making fictitious tax invoice or not based on actual transactions. This will certainly have an impact on the low level of state revenue. So the government seeks to prevent the occurrence of the mode of tax crime by improving internal controls and good tax administration in order to achieve the target of tax revenue.
PT.XYZ is one of the manufacturing industry companies that strive to improve internal and external controls in order to achieve goals to build compliance toward a tax-conscious society. One of the efforts of PT.XYZ is to create a special strategy to diagnose from any internal and external systems that transact with PT.XYZ in accordance with the rules and general provisions of taxation. To ascertain whether the user who transacted with PT.XYZ was in the category of the party who has run the rules in accordance with the provisions of the tax law, PT.XYZ create a tax guideline with the output of a matrix in which there are examples of cases, and the legal basis of each case for each transaction that occurs on the internal and external parts of PT.XYZ. The existence of tax guideline expected can control and diagnose or provide diagnostic tax review so that it can follow up the internal and external parties are not obedient.

If PT.XYZ has ensured that any transactions conducted by internal or external parties are running well and in accordance with the rules of the Taxation Act, it will affect the rewards granted by the Directorate General of Tax as compulsory taxpayer or award for large taxpayers. This reward is one of the programs in the initiative by the Directorate General of Taxes that aims for the big taxpayers to be more eager to implement the rights and obligations of taxation as well as the number of obedient tax payers is increasing, and the contribution of revenues derived from large taxpayers can increase and better than before. Based on the official website of DJP, headquarters of the Directorate General of Taxes appreciation of the Large Taxpayers who in every Regional Office of the Directorate General of Taxes of the registered taxpayers are awarded by the Minister of Finance, Bambang P.S Brodjonegoro. It is informed that in 2015 the contribution of the Taxpayers reached 32 percent of the total national tax revenue which means about Rp. 338.85 Trillions received by the State for tax payments made by the major taxpayers.

Total taxpayers who received the award amounted to 24 Taxpayers and PT.XYZ as one of the major taxpayers who are rewarded for tax compliance. As compulsory taxpayers, many benefits are obtained such as KITE facilities (Ease Import Export Objectives) which is facilities provided by the Ministry of Finance / The Directorate General of Customs to increase exports non oil and gas, as well as other benefits gained such as the special treatment for restitution of VAT whereby when PT.XYZ requests for a tax refund of overpayment the Directorate General of Taxes does not conduct any examination. Based on P-11 / BC 2005 P-24 / BC 2007 that the taxpayer complies with the facilities of the Directorate of Customs and Excise on imports that have received priority lane or Main Partner facility (MITA). Upon the award, PT.XYZ maintain this reward so that PT.XYZ can take advantage of VAT refund facility provided by the Directorate General of Taxes.

The current state of the tax collection system in which the government gives full trust to the public to deposit, report and pay taxes in accordance with the provisions of applicable tax laws, require taxpayers to participate and play an active role in harmonizing the system made by the government. Good cooperation between the government and the taxpayer is required in order to achieve the target revenue of the State derived from taxes. Although the tax collection system made by the government has gone well, but there is no awareness of the taxpayer to comply with the rules and systems made by the government, the state’s revenue will be lower. The most important factor of a good tax collection system is a compliant taxpayer and aware of its tax obligations. Here’s some definition of tax compliance by some experts:
1. The definition of tax compliance by Norman D. Nowak (Norman: 1980) is a climate of compliance and awareness of fulfillment of tax obligations, reflected in situations where:
   a. Taxpayers understand or seek to understand all the provisions of tax laws.
   b. Taxpayers fill out the tax form completely and clearly.
   c. Taxpayers calculates the amount of taxes correctly.
   d. Taxpayers pay taxes on time.

2. Definition of tax compliance by Safri Nurmantu in Siti Kurnia Rahayu (2010: 138) is a condition where the taxpayer meets all tax obligations and exercising his taxation rights.

3. The definition of tax compliance by Erard and Feinstein quoted by Chaizi Nasucha and has been put forward by Siti Kurnia (2006: 111) is a sense of guilt and shame, taxpayer's perception of fairness and justice of the tax burden, and the effect of satisfaction on government services.

4. The definition of tax compliance according to E.Eliyani (1989) in the 2006 Jatmiko study is report the information required, correctly fill the amount of tax payable, and pay taxes on time without coercive measures (Jatmiko: 2006).

5. The definition of tax compliance according to Machfud Sidik cited by Siti Kurnia Rahayu (2010: 137-138) is the compliance of voluntary tax obligations which is the backbone of the self assessment system, in which the taxpayer is responsible for self-determination of tax obligations and then accurately pay and report the tax.

6. The definition of tax compliance according to Gunadi (2013: 94) that the taxpayer has the ability to fulfill his tax obligations in accordance with the prevailing rules without the need for examination, thorough investigation, warning or threat of sanctions imposed both legal and administrative.

7. There are two kinds of tax compliance definition by Siti Kurnia Rahayu (2010: 138), that is:
   a. Formal Compliance
      A situation where the taxpayer fulfills the obligation formally in accordance with the provisions of the tax law.
   b. Material Compliance
      A situation where the taxpayer substantively or essentially comply with all the provisions of taxation material that is in accordance with the contents and spirit of the Tax Law. Material compliance may also include formal compliance.

According to Nashuca (2004: 148) aspects of tax compliance are juridical, psychological and sociological aspects which in juridical aspect, tax compliance seen based on observance of administrative procedure of tax obligation; psycholgis aspect where tax compliance seen from perception of taxpayer to extension, service and examination tax; sociological aspects of tax compliance seen from the social aspects of the tax system, among others, public policy, fiscal policy, taxation policy and tax administration. There are four types of tax compliance seen from the aspects of obligations and taxpayer compliance aspects, here are 4 types of tax compliance:

1. Material compliance from the aspect of taxpayer is the taxpayer must obey the formal tax regulations such as taxpayers must have NPWP, calculate report and deposit the tax payable in accordance with the provisions of tax laws, and report the personal tax return or corporate tax returns in accordance with the provisions of tax legislation. So in the
case of filling the Taxpayer's Notice Letter, taxpayer must fill correctly, completely and honestly.

2. Formal compliance is conveying the Notice of Taxes payable by private taxpayers and company on time and does not exceed the limits specified.

3. Voluntary compliance of the taxpayer is aware of the obligations of taxation in the implementation of obligations to pay, and report the tax payable voluntarily and according to ability without any encouragement and coercion from anyone. To increase the voluntary tax, according to Michael (1985) need justice and openness in the application, taxation procedures, regulatory simplicity, and good service from the government.

4. Compliance in force that is in accordance with the provisions of the Law of Taxation Article 1 that the tax is forced then in this case the Law has the authority to force taxpayers to pay taxes payable correct, clear, on time, and complete.

2. METHODS

This study describes the impact of implementation tax guideline of PT XYZ as an effort to increase tax compliance. Research conducted using data from PT XYZ. The processed data is about PT.XYZ tax compliance strategy, schedule activity internal division and schedule activity external division. The data then will be compared with the detail transaction of PT.XYZ and vendor taxation status. As a result, tax guideline draft will be formed. Finally, assessment process of internal and external divisions by tax compliance and supplier affair division will be done.

3. RESULTS AND DISCUSSION

3.1. Tax Compliance

Tax is one of the main sources of state revenues that are vital as a means of state development. Reported from www.kemenkeu.com (accessed on March 3, 2017), the amount of State revenue set for APBN 2017 of Rp. 1,750.3 trillion. This amount consists of tax revenue of 85.6% or equivalent to Rp. 1,498.9 trillion and the percentage for non tax revenues (PNBP) of Rp.14.3 trillion or equivalent to 250 trillion, and grants with a percentage of 0.1% or equivalent to Rp. 1.4 trillion.

![Figure 1 Target of APBN for Taxation Year 2017](image)

In 2017 the target for tax revenues fell 3% from the 2016 state budget target, quoted from www.cnnindonesia.com (accessed on March 3, 2017) even though tax targets in 2017 were low, the tax authorities made several breakthroughs to boost tax revenues one of which is to rely on
Tax Amnesty's policy to expand the tax base and to improve taxpayer compliance in tax payments.

With the percentage of tax as the main source of revenue of the largest state, the government's effort to optimize the state revenue derived from the tax is by seeking the right tax collection system, one of which is self assessment system. Where taxpayers are given the trust by the government to calculate, report, and pay their own indebted tax in accordance with the Tax Law. Because the government gives the freedom, the tendency of taxpayers to avoid the tax obligations is high enough. If this happens the state budget revenues from taxes will not be optimal. The government has tried optimally in designing a tax collection system. But the actual level of taxpayer compliance in low taxation resulting in low tax revenues. In principle, people do not voluntarily spend some of their income to pay taxes, so they have to force. But because the public feels that the tax system in Indonesia does not reflect the principles of justice for taxpayers and weak law enforcement in Indonesia makes the taxation governance is not ideal. Because the most important factor in the tax system is tax compliance. Based on www.kemenkeu.go.id (accessed on March 3, 2017) Finance Minister Sri Mulyani Indrawati assessed that taxpayer compliance rate in Indonesia is still very low which will affect the low tax revenue ratio. In order to achieve the 2017 state budget target from tax revenue, it is necessary to emphasize that the government and taxpayers can work together to contribute to achieve the target, the government should establish a good taxation management system, and for taxpayers to participate more in tax compliance.

So PT.XYZ created a special strategy and established a good taxation management system in order to be in line with the current tax collection system in order to achieve a target of state revenue derived from taxes.

3.2. PT.XYZ Tax Compliance Strategy

To maintain the rewards granted by the Directorate General of Taxation to 24 major taxpayers including PT.XYZ and to obtain fiscal and non-fiscal facilities, PT.XYZ created Tax Compliance strategy by ensuring that transactions conducted by both Internal and External Division of PT.XYZ has been in accordance with the regulations and general provisions of the tax law, which then the strategy will be implemented to all internal and external divisions in order to comply with the rules and general provisions of taxation. If one division does not comply with the general provisions of the tax law, it will affect Tax Obdiance Reward. Here are the schemes and examples of strategies undertaken by PT.XYZ.

In the chart above PT.XYZ classifies transactions conducted by external and internal divisions. External transactions can be controlled by the Tax Compliance & Supplier Affair division to
implement policies and strategies to improve tax compliance. One of them is by making a tax
guideline with output in the form of matrix and follow up on the policy if the party transacting
is not in accordance with the policy made then the provision of hard reprimands, sanctions and
ultimatum will be done by PT.XYZ when vendors and customers do harm PT.XYZ in matters
relating to the rules and rules of the General Taxation Provisions which if in langgar will have
an impact on the submission of facilities and rewards PT.XYZ.

The policy to be made by the division of Tax Compliance & Supplier Affair PT.XYZ is by
creating a tax guideline with output in the form of matrix that describes the activities and
transactions that belong to certain types of tax objects, as well as the tax base, and tariffs subject
to the provisions of regulations applicable taxes. The first thing done by division of Tax
Compliance & Supplier Affair in implementing and implementing taxation regulation that is
making activity schedule or making planning and planning in the form of activity table which
describe the activity form that must be done to Division of Tax Compliance & Supplier Affair
so that Tax Compliance can be implemented to all internal and external divisions related to the
transactions conducted.

3.2.1. Schedule Activity Internal Division
PT.XYZ creates an activity schedule to determine what steps are being taken to be right on
target and in accordance with the goals to be achieved. Then PT.XYZ create activity schedule
or step taken by PT.XYZ to internal user user to comply with applicable Taxation Act. Here is
an example of detailed Schedule Activity that has been in planning by the division of Tax
Compliance & Supplier Affair for the internal division of PT.XYZ.

<table>
<thead>
<tr>
<th>No</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Discuss I: Kick Off PT.XYZ Tax Compliance Activity --- Gain understanding/commitment FOR FC &amp; TCSA Division</td>
</tr>
<tr>
<td>2</td>
<td>Discuss II: Concept &amp; activity schedule --- Output : A4 Explanation &amp; Detail activity schedule</td>
</tr>
<tr>
<td>3</td>
<td>Identify division related tax transaction</td>
</tr>
<tr>
<td>4</td>
<td>Prepare matrix of tax transaction</td>
</tr>
<tr>
<td></td>
<td>a. Nemawashi &amp; genba to related division to get some understanding about tax transaction</td>
</tr>
<tr>
<td></td>
<td>b. Mapping detail of tax transaction for each division</td>
</tr>
<tr>
<td></td>
<td>c. Issue 1st draft matrix</td>
</tr>
<tr>
<td></td>
<td>d. Discuss with tax consultant about tax transaction compliance --- completeness, check latest update regulation</td>
</tr>
<tr>
<td></td>
<td>e. Issue final matrix</td>
</tr>
<tr>
<td></td>
<td>f. Nemawashi and update material to Division Head</td>
</tr>
<tr>
<td></td>
<td>g. Issue cover letter sign off Division Head</td>
</tr>
<tr>
<td>5</td>
<td>Socialization to related division</td>
</tr>
</tbody>
</table>

1. Discuss I
   At the first meeting discussed the understanding between division of Tax Compliance &
Supplier Affair on conceptualizing for Schedule Activity.
2. Discuss II
   Create Concepts and Schedule Activity with the same understanding and produce an output
in the form of a matrix that contains explanations and exposure Instructions and Procedures of
taxation on transaksi and detail schedule activities.
3. Internal
   a. Identify internal divisions that conduct transactions
b. Prepare a matrix of tax transactions conducted by internal divisions. Things to do are:
- Discussion and meet directly with the Internal division to discuss about transactions conducted by each division which in each transaction can be analyzed elements of taxation that arise in each transaction
- Create mapping of transaction details from each division. Example details of domestic and export sales transaction mapping done by division of Production Business Management Division or PBMD where the division sells dies & jieg and part. The above transactions are subject to VAT at a rate of 10% for domestic sales which may be the output tax for the PBMD division, and for export subject to 0% tariff for the PBMD division. Purchasing Division performs three transactions namely purchases and repair services. For the purchase of the imports are in the use of pph Article 22, as well as VAT and PPnBM. On repair service transactions imposed pph Article 23 with PT.XYZ as tax cutter pph 23. For division General Affair Division make purchases transactions subject to VAT by 10% and pph 23 deduction for repair services. For External Division, and Export Import Division make deductions on transactions made by the transaction opponent for repair services subject to pph 23 with PT.XYZ as tax collector. In Mapping Detail Transaction below describes the activities undertaken by the user on the internal division of the Division of Product Business Management Division or PBMD as one of the divisions that conduct transactions on Domestic sales for Dies & Jieg and Part and purchase and use repair services. On sale to Domestic and export as well as purchasing and repair services made by PBMD division it can be classified type of taxes and tariffs imposed on each type of tax. Here is an example of transaction details on both Domestic and export purchases as well as financing of purchases and repair services at PT.XYZ.

Table 2 Mapping Detail Transaction PT.XYZ

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
<th>Name of Tax</th>
<th>Rate</th>
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<th>Activity</th>
<th>Description</th>
<th>Name of Tax</th>
<th>Rate</th>
<th>Tax Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Designing a matrix in the form of a tax guideline in which case is present, the type of tax according to the mapping of transaction details that have been made. Below is an example of a tax guideline for PPh 22 with two different case types. For Tax Guideline number 1 and 2 describes importers who import goods and services for organizer event organizers, legal services, construction services, and catering, the above case can be classified and identification of any type of tax contained in the case and the type of regulation that regulates the tax on cases for import of luxury goods and calculation methods based on regulation. Here is an example matrix for tax guideline of type 22 tax on the transactions conducted by division Purchasing division.

Table 3 Tax Guideline Draft
• Discuss the results of the draft matrix design with Tax Consultant regarding regulatory updates on transactions made by internal division and completeness of case and explanation.
• Designing the final matrix after discussing output for tax guideline with tax consultant
• Facing the head of the division to provide concepts and materials and matrices.
• Signature of the division head to be able to approve the tax guideline that has been made.
• Provide socialization to each internal division regarding tax guideline in the form of matrix to facilitate the calculation of tax on transactions conducted by related divisions.

3.2.2. Schedule Activity External Division
The Tax Compliance & Supplier Affair division and the Financial Control division create an external activity schedule that will be carried out as a first step towards achieving tax compliance targets. Here is a sample activity schedule table for external.

Table 4 Schedule Activity External Division

• Information on vendor tax status:
• Identify the status of the vendor whether including the classification of taxable or non-Taxable Entrepreneurs who can be categorized as taxable entrepreneurs if gross income is more than 4.8 billion.
• PT.XYZ asks for documents such as proof of cuts & tax returns and taxes.
• Identify the type of business of the vendor whether included into one hundred percent of services, or materials only, or including services and materials.
• Implementation of the output of tax guideline to External PT.XYZ
• Implementing the Tax Guideline to external parties
• PT.XYZ provides information on the use of tax documents such as Certificate of Domicile (SKD) or OECD, billing id, e-invoice, SKB or Certificate of Free Cutting and or Income Tax for taxpayers having certain gross circulation.

Before categorizing vendors including compulsory taxpayers or not, then the Tax Compliance & Supplier Affair division may ask the tax office to be cooperative in providing data Vendor PT.XYZ whose status is not complied. Here is a scheme done by the Tax Compliance & Supplier Affair division in creating the category and classification of non-compliant vendors. Here is a scheme in determining vendor comply or non comply.

![Figure 3 Scheme Determination of Vendor Taxation Status](image)

Users of PT.XYZ in this case is the internal division that transacts to the vendor as an external party. Vendor as the party who collects, deducts and reports the tax payable to the Tax Office (KPP). Vendor status including obedient or non-compliant category can be known through the report of Tax Service Office (KPP) where the vendor is registered whether or not to report the tax on whether the taxpayer will report the vendor's tax status to the Taxpayer Office of the big taxpayer. From these data, Tax Compliance & Supplier Affair PT.XYZ can create a summary and make data vendors are not compliant in order to be followed up by the division of Tax Compliance & Supplier Affair PT.XYZ against non-comply vendors. Below PT.XYZ creates a summary audit for vendors regarding taxation status. For the status of the vendor can be viewed based on the color of the description for the green color the tax reporting status is incomplete, for the yellow color the tax reporting status is incomplete up to three times, for red color four times no tax reporting and for the green information there is no transaction. Then for vendors who report the tax does not exceed the time period then by PT.XYZ then the recap with the date of deposit information. Then it can be classified whether the vendor is compliant (comply) or not. Here PT.XYZ has created a vendor status classification.

Table 5 Status of Taxation and Reporting PT.XYZ
Data vendors are not obedient then by the division of Tax Compliance & Supplier Affair PT.XYZ in follow-up by providing socialization with the output of tax guideline for vendors that are not compliant (non comply). However, if the vendor after being given socialization but there is no real action to pay and report the tax payable then PT.XYZ will terminate the contract with vendor partners. Here is an example of a tax guideline given is for PPh 4 paragraph (2).

In the above Tax Guideline has been implemented on the internal division as well as vendor partners with the provision of socialization in cooperation with tax consultants. However, due to the issuance of new regulations such as the regulation concerning the pricing transfer pricing document issued by the Minister of Finance of the Republic of Indonesia no 213 / PMK.03 / 2016 in this case the Tax Compliance & Supplier Affair division must update the tax guideline in accordance with the new regulations even though the implementation the regulation has run. Then PT.XYZ must reprint the tax guideline in accordance with the new regulations and tax rules. Against the implementation of the tax guideline PT.XYZ can conclude that the internal division as well as the vendor in terms of tax compliance are very cooperative together to build compliance toward a tax-conscious society. The following table of assessment provided by PT.XYZ on the attention of internal and external divisions in the implementation of tax guideline and in the socialization of the new tax regulations.

### Table 6 Assessment of Internal and External Divisions by Tax Compliance & Supplier Affair Division

<table>
<thead>
<tr>
<th>No</th>
<th>Item</th>
<th>Divisi</th>
<th>Internal</th>
<th>Eksternal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pemahaman mengenai regulasi perpajakan baru</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Implementasi terhadap regulasi maupun tax guideline</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Keptuhan menyampaikan laporan SPT</td>
<td>5</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Keptuhan membayar pajak</td>
<td>5</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>20</strong></td>
<td><strong>18</strong></td>
<td></td>
</tr>
</tbody>
</table>
In the table above, PT.XYZ provides assessment based on supervision, control, and genba and nemawashi conducted directly by division of Tax Compliance & Supplier Affair in cooperation with Tax Consultant. Although for the total assessment of completeness on the external side to the understanding of the regulation, and the implementation of the regulation is quite high but for compliance in submitting, reporting and in tax payments based on VAT IN Vendor audit data is not perfect and there are still shortcomings in the reporting of incomplete tax, then the division of Tax Supplier & Compliance Affair can directly nemawashi and genba or go directly to be able to provide socialization to the vendor in order to immediately perform obligations as a taxpayer that is to deposit, report, and pay the tax payable. If after conducting the socialization and giving the output of the tax guideline there is no change, then PT.XYZ may take immediate action to revoke the contract with the vendor.

For efforts made by PT.XYZ to ensure all transactions conducted by internal and external divisions are in compliance with the regulations in 2016 PT.XYZ received a reward or appreciation and appreciation carried by the Directorate General of Taxes registered in DGT Regional Office Compulsory Large taxes. Appreciation and appreciation are given by 24 big taxpayers including PT.XYZ because they are obedient and cooperative with KPP officers respectively. In this case the Directorate General of Taxes after awarding also plans to hold regular meetings to discuss various problems in the field and assist taxpayers to be able to implement the rights and obligations of taxation in accordance with tax regulations.

4. CONCLUSION

There is evidence that the implementation of tax guideline can help PT. XYZ in improving compliance because it has been able to overcome the problem of tax administration issues associated with the vendor. In order for the tax guideline can always be applied in order to fulfill the obligation of taxation for the future period then it is necessary for PT.XYZ should always update the new taxation regulation.

5. REFERENCES

“Tingkat kepatuhan wajib pajak di Indonesia masih sangat rendah” www.kemenkeu.go.id, Accessed on 13 March 2017
ABSTRACT

Indonesia’s struggle with infrastructure investment persists despite concerted efforts by the national government to accelerate progress through provision of record levels of public funding and a more robust and accommodating regulatory framework for attracting private investment. A conventional wisdom has emerged from consultants, multi-lateral agencies and scholars on the remedies for attracting private participation. Most of this wisdom is too high-level to be of practical value for agencies. For example, there seems little point telling public agencies that they need to improve transparency, plan better, remove corruption or co-ordinate their agencies better. This paper focusses on two limitations for attracting private investment to public infrastructure that are capable of being addressed. First, Indonesia’s capital market does not appear to be well-suited to providing funds for such purposes. It does not have the required management capabilities and its institutional investors do not have sufficient remit for such involvement. Second, the public sector is also constrained in its store of relevant capacities. These two deficiencies conspire to become self-reinforcing – a shortage of capabilities in one sector reduces incentives for the other sector to develop them, making it progressively more difficult to bring projects to fruition. The failure of a privatisation of public transport services in Melbourne, Australia is examined to illustrate this problem of capacity shortages in both sectors. One existing and two nascent Indonesian public private partnerships are then examined in the light of the management capabilities required. While foreign investment and advice can help, the need to develop deep and more differentiated skills in both sectors is unavoidable. It cannot be assumed that developing public private partnership capabilities in central agencies will fill the gap. The Melbourne study shows the danger of relying solely on central agencies to provide capabilities and how easy it is to under-estimate the value of building capabilities within operating agencies.

Keywords: Competencies; Infrastructure; Public Private Partnerships

1. INTRODUCTION

In November 2014, Dr. Ir. Bastary Pandji Indra, Director of Public Private Partnership Development at Bappenas told a business conference that Indonesia’s priority infrastructure investment requirement at that time was USD 477 billion. He identified USD 99 billion as being available in national and regional government budgets. A further USD 37 billion was to
come from State Owned Enterprises and “off balance sheet”. The remaining USD 347 billion was to come from USD 92 billion of private sector funds through PPPs leaving a funding gap of USD 230 billion.

It was clear that he saw private funding as being an important part of filling the gap, describing PPP as “the mainstream of infrastructure financing in Indonesia” (Indra, 2014).

At around the same time, the Asian Development Bank issued a completion report on assistance provided to the Indonesian Government through the ADB by the Japanese Government for PPP capacity development:

‘…the ability of public sector (to fund infrastructure investment) is limited by its macroeconomic objectives to keep public sector debt at a sustainable level and reduce financial deficits. Due to these constraints, the government anticipates that about 60% of its planned infrastructure financing requirements will be sourced from the private sector.’ (The Asian Development Bank (ADB), 2014)

McKinsey commented on Indonesia’s relatively poor performance in attracting private investment into infrastructure:

“…few PPPs in Indonesia have been able to finalize contract terms. According to BAPPENAS…only 24 PPPs have made it to construction or operation, with no new PPPs reaching financial close…. since 2009. Most are stuck in the preparation and transaction stages. Out of the 48 PPP projects worth more than $57 billion (approximately 570 trillion rupiah) announced in 2013 by BAPPENAS, 26 are in preparation stage and 21 are in transaction stage. Even the five PPPs identified as showcase projects are struggling, and only one—the Central Java Power Plant—is signed and currently embarking on financial close.” (Lin, 2014)

Three years on and the hopes for more vigorous private sector participation in infrastructure have not been realised. Indonesia Investments comments that:

‘ Earlier, during the Yudhoyono administration, the government put its hope in public-private partnerships (PPPs) for infrastructure development. However, these schemes have shown very limited satisfying results.’ (Indonesia Investments, 2017)

At the same time, the requirement for private funds has grown as indicated in the following table:

<table>
<thead>
<tr>
<th>Sector</th>
<th>Government</th>
<th>SOEs</th>
<th>Private</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation</td>
<td>86.8</td>
<td>21.4</td>
<td>31.6</td>
<td>139.8</td>
</tr>
<tr>
<td>Electricity</td>
<td>7.8</td>
<td>34.7</td>
<td>33.9</td>
<td>76.4</td>
</tr>
<tr>
<td>Energy (oil and gas)</td>
<td>0.3</td>
<td>11.6</td>
<td>26.9</td>
<td>38.8</td>
</tr>
<tr>
<td>Information, Technology, and Telecommunication</td>
<td>2.1</td>
<td>2.1</td>
<td>17.2</td>
<td>21.4</td>
</tr>
<tr>
<td>Public Basic Facilities</td>
<td>76.1</td>
<td>3.9</td>
<td>10.3</td>
<td>90.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>173.1</strong></td>
<td><strong>73.7</strong></td>
<td><strong>119.9</strong></td>
<td><strong>366.7</strong></td>
</tr>
</tbody>
</table>

Notes: Government including state budget and regional government budget

In Medium Term Development Planning of Indonesia 2015-2019, the majority of Indonesia’s infrastructure financing needs come from government (USD 173.1 billion, 47%). The second highest proportion is expected to come from private (USD 119.9 billion, 33%). The last portion comes from SOE’s (USD 73.7 billion, 20%).

Private financing is most dominant in the electricity and transportation sectors. Government financing is more dominant in the transportation and public basic utilities sectors. The SOEs sector is dominant in electricity and transportation. The information, technology, and telecommunication sectors are clearly dominated by private sector financing.

The national government is doing its bit to stimulate private sector appetite. The third stage of Indonesia’s 2015-2019 National Medium Term Development Plan includes a record amount of USD $22.9 billion provided in its 2016 Budget for infrastructure development (World Bank, 2017). PwC (2016) reported that this increase in spending was having an effect in that ‘total government infrastructure spends in Indonesia increased by a substantial 51%... in 2015’. This was accompanied by an increase in Foreign Direct Investment of 9.6% in 2015. However, PwC forecasted a downturn in infrastructure spending as a proportion of GDP after 2019. (PwC, 2016)

Yet the need for public funds to be supplemented by private funds as well as private sector innovation is greater than ever. As the following graphic illustrates, the World Economic Forum has identified infrastructure provision as the weakest point in Indonesia’s competitiveness with lack of infrastructure coming in third of its ‘most problematic factors for doing business’ (Schwab, 2016).

2. BACKGROUND
From one perspective, the poor track record of infrastructure investment in Indonesia is paradoxical.

Infrastructure PPPs offer particular promise for countries such as Indonesia which find themselves at a relatively low point in infrastructure investment as the return from one dollar of investment is higher for such countries than is the case for more developed economies. This return can be realised not only from the contribution to GDP from de-bottlenecking of the economy but also de-bottlenecking of the society as infrastructure:

“... has a disproportionate effect on the incomes and welfare of the poor by reducing costs to access markets, raising returns on existing assets, facilitating human capital accumulation, and facilitating agglomeration economies and the dissemination of knowledge” (McKibbin, 2010) P.3.

Another aspect of the paradox is that countries like Indonesia may find it easier than developed countries to capture more of the value of their infrastructure investments. Such investments create positive externalities which can be seen as value “leakage” from projects. Toll roads reduce negative impacts of congestion on free roads. Public transport investments increase property values in areas surrounding stations. Port investments benefit not only importers but exporters from other countries. And so on.

Ideally, much of this leakage would be captured by one of the parties to the PPP and made available to the government to help offset the total costs of the project. However, this has proved difficult for a variety of reasons, mostly related to political considerations. Developing countries like Indonesia may have an advantage in this respect insofar as “greenfield” projects typically make up a higher proportion of the total. One of the advantages of such projects is that they are often sited in less developed areas with fewer entrenched interests with the ability to prevent value capture innovation.

So, if the economics are so good, why is the performance so poor?

Apart from the strong spending stimulus referred to previously, the Government introduced important reforms in 2015 through Regulation No.38 on Cooperation between Government and Business Entities in Procurement of Infrastructure. These reforms included adding new types of infrastructure to eligible projects; providing for value capture; by-passing tender by making direct appointments subject to certain conditions; providing private developers with the ability to act on behalf of government agencies to acquire land; and giving agencies the capacity to appoint their own PPP units (see Baker and McKenzie 2015)

The fact that such decrees are considered necessary at all provides an important clue in addressing what might be done. The reliance on this remedy suggests that the economics are not the problem. As successive editions of the Bappenas “PPP book” show, there are plenty of worthy projects likely to generate high levels of economic and social returns.

The aforementioned McKinsey report succinctly summarised the conventional wisdom in listing the factors that it saw as working against Indonesia: lack of transparency; mechanisms too complex for officials to manage compared with the traditional method of calling on public funds; lack of the correct skills within agencies; a complex, confusing regulatory environment
partly driven by decentralised government; and Indonesia’s notoriously difficult land acquisition processes.

This is just one of many views from a large and still growing body of work by scholars, consultants and international development agencies on the causes of Indonesia’s poor record in attracting private investment into PPPs and what might be done about it.

Generally, these and other analyses pick up the factors listed as well as adding additional factors such as risk averse bureaucratic cultures; judicial competence and performance; political will; the need for greater separation of governance functions; and commitment to remove corruption.

Overall, it is clear that there is now a conventional wisdom around what needs to be done for Indonesia to accelerate progress in this area. However, this consensus view is limited in its usefulness as it is often pitched at a level which is more aspirational than real for public managers. An important exception is Davison’s work on recent toll road developments in Indonesia (Davidson, 2015). The book shines a bright light on the non-institutional factors that can stymie progress and the skills needed to navigate projects through blockers at all levels.

To sharpen this focus on management issues, there are two other factors that merit particular attention:

2.1. Limitations of Indonesia’s Capital Markets

According to the World Bank:

‘…capital markets in Indonesia do not appear to be a viable immediate option to raise new infrastructure finance. With the exception of government bonds (with average daily turnover of about US$885 million), the stock and corporate bond markets in Indonesia have much lower daily turnovers of about US$450 million and US$5060 million, respectively’ (The World Bank, 2017) P.10

In addition, while pension funds and insurance companies have significant levels of assets under management, they favour investing in short-term securities while most international institutional investors are similarly averse to long-term exposures.

While the availability of foreign direct investment means that the limitations of local capital markets might not have an impact in theory, the practical reality is that foreign investors routinely seek out local partners in whatever markets they are looking to do business. This can be expected to be especially the case in those developing countries with opaque government and judicial systems; weak enforcement of property rights; and where the dynamics of relationships outside of institutional frameworks plays a large part in determining outcomes.

Davison’s work shows that politics matters when it comes to road investment, and inferentially infrastructure investment generally, so foreign investors need the guidance of local partners as well as public officials if they are to see their projects through.

2.2. Management Capability

This connects with the second factor – the quality of management within public sector agencies and in private sector companies for delivering PPPs.

Davison’s book reminds us that the public manager needs to be able to manage politics as well as process. This is important. Almost all of the literature on the constraints to PPP investment points to limitations of management capability. However, this is usually just another item in the overall checklist offered by such analyses. Little attention is given to management capability in the private sector yet that has been as responsible for PPP failure as public-sector shortcomings. This is where the limitations of Indonesia’s capital markets come in – it is not just about the supply of investment funds, the competency of those charged with managing those funds matters too.

The following case is briefly examined to illustrate the centrality of the quality of management for PPP success. It may seem to be drawing a long bow to be using the franchising of public transport services in Melbourne, Australia 18 years ago for lessons for Indonesia. However, this is a particularly useful case as the various analyses of it have made the management issues unusually clear. This allows important insights into not only the magnitude of the management task but also into how its importance can be too easily under-estimated by both PPP designers within government and overly-optimistic private sector bidders.

3. A CASE STUDY AND SOME IMPLICATIONS FOR THREE INDONESIAN PROJECTS

3.1. Franchising Melbourne’s public transport

In 1999, the Government of the State of Victoria, Australia privatised the operation of public transport services in the State's capital, Melbourne. The city is the second largest city in Australia with a population at that time of around 3.5 million.

Up until 1999, the system had been largely run by the Government. For several reasons, including its ideological commitment to neo-liberal principles, the Government decided to privatise the operation of the system.

Following a competitive bidding process, three franchises of 12 to 15-year duration were allocated to National Express (UK), Connex (France) and Transdev (France). Melbourne’s public transport system consists of tram, train and bus services. The tram system is the largest in the world as measured by route length. The financial numbers were large too as the Government’s operating subsidy for the whole system was more than AUD550 million/annum.

Three year later and the system was in crisis with the Government having to increase its subsidy by AUD105 million/annum. On 16 December 2002, National Express, the largest of the three private operators in the Melbourne public transport system, abruptly announced it was abandoning its train and tram franchises only three years into its long-term contracts thereby forfeiting the performance bond it had been required to lodge with the Government of AUD135 million. It took another two years for the Government’s successor to settle the matter down at a cost of another AUD200 million/annum in operating subsidies.

Analysis performed for the World Bank focussed largely on financial circumstances - the failed franchise was too highly geared:

‘The value of the minimum equity and performance bond requirements was low relative to the risk assumed by the operators. Because of this, relatively modest deviations in
demand and efficiency gains from forecast were enough to create losses whose present value exceeded the value of equity and performance. (Ehrhardt & Irwin, 2004) P. 20

This is an orthodox economic perspective predicated on the assumption of actors making rational choices. It is interesting that a similar conclusion was drawn by the UK’s National Audit Office in its review of the debacle surrounding the collapse of Metronet, the larger of the contractors for the refurbishment of the London Underground (National Audit Office (NAO), 2009).

A different perspective is provided by Stanley and Henscher (2004) who take a systems approach using Macario’s framework of the three levels of strategy, tactics and operations to explain the failure of the purported benefits to be realised:

‘Franchising in Melbourne involved moving from public to private operators at the operational level, with sparse content at the strategic level, a weak tactical level and staff managing the franchising process who seemed to lack a deep understanding of public transport operations and economics’ (P.49)

Mees (2005) uses a variation of this approach which places more emphasis on institutional failures to explain the outcome. These include systemic flaws in the analysis by the Treasury; the inability of the Government to avoid having risk transferred back to it; ‘regulatory capture’ by the franchisees; and the moral hazard created by the need to repair the politics as well as the commercial arrangements.

However, the most convincing explanation comes in the form of a case study written at the time for The Australian and New Zealand School of Government (Watts, 2004). While careful to avoid comment on the issues, the case study details numerous management failings, within both the Government and the unsuccessful franchisee.

On the Government side, these included a lack of operational understanding within the Treasury which developed the policy; lack of contracts administration within a Department of Transport suddenly fining itself needing to change its business from operating to administering contracts for others to operate; an excessively legalistic approach to dispute resolution as a consequence of these factors; and a general disconnect between the public and private sectors.

For its part, the unsuccessful franchisee failed to make the same efforts as its two counterparts to come to grips with the Victorian Government’s culture and modus operandi resulting inevitably in relationship and communication breakdown. This may well have been an outcome driven by its lack of operating experience when compared with the two French companies, both of which had long track records of working with government in France.

The case study perspective focusses on the actual management of the new arrangements by the parties. It sheds more light on the reasons for the outcomes than the economic, systems or institutional approaches referred to in the foregoing. More importantly the case study highlights the immense difficulty of managing in an environment of technical, legal and commercial complexity without parties on both sides having in place the distinctive core competencies required to carry out even the day-to-day functions of contracts administration; stakeholder management; marketing services; and operating the system.

Under the assessments of Indonesian PPPs referred to previously, these failings would be classed as shortfalls in institutional capacity. Langaas has defined building that capacity as
containing three main activities: 1) skill upgrading, 2) procedural improvements and 3) organisational strengthening (M. D. Langaas, 2007).

This definition glosses over the many, difficult challenges that management faces in this space. Effective PPP management requires much more than just building skills and ‘organisational strengthening’. It demands performing base level tasks at a superior level combined with the ability to add more specialised skills.

The base level tasks include:

- Contracts administration
- Understanding and applying effective procurement tasks
- Working understanding of administrative and commercial law
- Financial analysis skills
- Understanding of project management
- Risk management skills

The specialised skills include

- Understanding of domestic and international capital markets
- Ability to identify opportunities for value capture, particularly capture some of the value of the positive externalities inherent in infrastructure investment
- Specific skills needed for realising value in appreciation of land values created by PPP spillover effects
- Political skills for managing wide ranges of stakeholders with divergent interests
- Highly developed sense of the respective capabilities of the public and private organisations involved to allow for effective risk allocation and provision of sufficient scope for private sector innovation.

The history of PPPs in developed countries is replete with poor outcomes attributable to management failure. If governments and companies with generations of operating experience cannot get it right, how can developing countries with much more limited histories be expected to succeed? The challenge for Indonesia is compounded by decentralisation of power and responsibility to more than 30 provincial governments and at least 24 State Owned Enterprises that are players in infrastructure investment.

The easy remedy is to embed the required expertise in gateways. According to the OECD:

‘The Ministry of Finance should play a key role at all gateway stages of PPP projects. It should act as a gatekeeper providing scrutiny and approval of all significant infrastructure investment decisions be these PPP or non-PPP projects.’ (Organisation for Economic Co-operation and Development (OECD, 2012) P.25

According to the World Bank (2007), PPP units will struggle when they fail to get high-level political support; when procurement is not transparent; and when co-ordination between the levels and various arms of government is poor. While there is obviously commitment from the highest levels of Indonesia’s national government, analyses of the country’s poor record in delivering PPPs regularly point to the latter two factors as being among the most important reasons for such little progress.
The Melbourne case study highlights the problems of co-ordination within government. There was a disconnect between the ‘Treasury, which designed the new franchise arrangements, and the Department of Transport which was required to operate them. The speed with which the franchises were designed and awarded left the Transport Department unprepared for its change of role from operator of the system to administering contracts for others to operate it.

The outcome was excessive reliance on the ‘black letter’ of the contract; a seeming unwillingness to understand the difficulties faced by the franchisees; prolonged disputation with them; and mounting frustration on both sides. This breakdown at the operational level is seen to have made a significant contribution to the decision of National Express to withdraw and suffer the associated financial penalty.

This is a graphic illustration of two lessons:

First, having central agencies playing gatekeeper roles can add value but they face the danger of being out of touch with operating requirements. This makes it harder for them to understand the risks as well as recognising the opportunities. The pre-occupation of PPP units exercising gateway functions is with the design and construction stages of PPP contracts. Australia’s experience is that many of the problems are encountered at the operating stage e.g. Sydney’s Cross City Tunnel and Brisbane’s Airtrain. PPP units are generally not well equipped to spot such problems in the design of PPP’s. These competencies are more likely to be found in operating agencies so it is critical that they are involved in reviewing proposals at an early point.

Second, there is the need for PPP design to focus on management in those agencies. The first requirement is to carry out a realistic appraisal of management capabilities in the relevant operating agencies; a thorough assessment of the capabilities that need to be added; and judgements made about the capacity of agencies to add the required capabilities. These assessments need to form part of the decision on proceeding with PPPs.

The perspective of focusing on the operation and management of PPP rather than just the construction and financing, can be applied to the analysis of some Indonesian projects to illustrate its usefulness. The remainder of this paper considers these management issues in the context of one existing project (Batang Power Plant) and two possible projects Jakarta MRT east-west line and the Jakarta seawall.

3.2. Batang Power Plant

Construction of West Java’s 2,000 MW Batang Power Plant is well advanced with the first unit due for commissioning next year. The project is widely regarded as a success insofar as considerable hurdles have been overcome in its delivery, particularly land acquisition. It is instructive to consider the allocation of responsibilities between the public and private sectors.

- Demand risk: This was effectively retained by the public sector as the government-owned monopoly power distributor, PT Perusahaan Listrik Negara (PLN), entered into a ‘take or pay’ contract effectively removing from the private investor (PT BPI) the systemic risk of adverse variations in economic circumstances and its impact on power demand
- Financing risk: partially retained by government through the Indonesia Infrastructure Guarantee Fund (IIGF)
• Pricing risk: fixed price agreed by both parties
• Transaction execution risk: assumed by World Bank
• Land acquisition risk: retained by national government
• Political environmental risk: retained by government

It appears that the only substantive risks allocated to the investor were the design and construction and operating risks. This is not to suggest these risks are inconsequential. The costs of construction have no doubt been increased as a consequence of the project being at least four years behind its original schedule mostly because of delays with land acquisition. The operating costs will not be known until power generation commences in 2019 or 2020 but the magnitude of this risk would appear to be low given that the plant is using proven technology. The ‘take or pay’ contract also provides some protection from this risk for the private party.

The key feature of this project is that there is a clear allocation of risks to those parties be able to manage those risks. The risks allocated to the public party, the PLN and its financial backer, the IIGF, are land acquisition and demand whilst the private party, BPI, assumes the risks associated with design and construction and operations.

As highlighted by Atmo et. al. (2017), analysis of PPP performance in power projects demonstrates that the linking of payments to operational performance leads to better operational performance. Therefore, the clarity of the allocation of income risk is fundamental to successful operating performance.

It is an indication of the Government’s comfort in its ability to manage private investment in this sector that it regulated earlier this year to sharing with the private provider more of demand risk for force majeure and for demand beyond the private sector’s debt recovery period. (Baker McKenzie, 2017).

3.3. Jakarta MRT east-west line

The Jakarta Mass Rapid Transit (MRT) will stretch across 110.8 km of the city. This includes 23.8 km for the North-South Section (Lebak Bulus – Kampung Bandan) and 87 km for East-West Section.

The North-South project is under construction and comprises seven elevated stations and six underground stations along 15.7 km of the South-North Corridor from Lebak Bulus to Bunderan HI. It is being financed by the Indonesian Central Government and the Provincial Government of DKI Jakarta, supported by the Japanese Government through the Japan International Cooperation Agency (JICA). JICA is providing debt finance provided in the form of a soft loan commitment amounting to ¥ 125,237,000,000, - (USD 1.1 billion) with low interest 0.4% per annum and loan tenor for 40 years.

To progress the project a separate entity PT Mass Rapid Transit Jakarta (PT MRT Jakarta) was established on June 17, 2008, in the form of Limited Liability Company (PT) with majority share owned by Jakarta Provincial Government (ownership structure: 99.98% of Jakarta administration and 0.02% of PD Pasar Jaya).

PT MRT Jakarta has a range of responsibilities including the construction of MRT infrastructure and facilities and its operation and maintenance, as well as value capture expected to be realised from development and management of property / business in stations and surrounding areas.
Notwithstanding this range of responsibilities, the extent of skills and knowledge transfer is not known. To receive the Japanese assistance, the project had to fulfil specific requirements, namely the prime project supplier needed to be Japanese companies; 30% of the technology had to be Japanese; and JICA approval was required for the procurement process.

The city of Jakarta is considering a public-private partnership (PPP) to finance the much larger East-West Section. Reported in the Jakarta Post (5 May 2014), Basuki "Ahok" Tjahaja Purnama, then Deputy Governor of Jakarta, stated in May 2014:

‘The difference will be in the financing arrangement. We don't want to use a foreign loan to finance the east-west line. We aim to find private investors in a PPP arrangement with (city-owned MRT operator) PT MRT Jakarta at the helm.’ (Dewi, 2014)

Clearly, the stock of management capability within the two governments involved is a major risk factor. Although there are other factors, a full stocktake of those capabilities and the resources needed to fill identified gaps needs to be carried out before any commitment is made to progress the project as a PPP given the size and nature of the construction, operations and revenue generation risks involved. There should also be considerable scope for value capture and the stock take needs to include an assessment of the ability of the relevant agencies to add value capture to the tender.

3.4. National Capital Integrated Coastal Development (NCICD) – Jakarta Sea Wall

The NCICD masterplan is a joint project between the governments of Indonesia and the Netherlands with the feasibility study for the masterplan being financed largely by the Dutch Government. The master plan recommends three phases of action:

• Phase A requires the reinforcement of the existing sea wall defences,

• Phase B the development of a 32-km outer sea wall and land reclamation and

• Phase C is the long-term development in the east of Jakarta Bay.

The three engineering solutions are supporting activities such as improving water quality and providing piped water supply complemented with land reclamation, toll roads and port expansion.

It is estimated that the plan will cost $40 billion to implement, with the Indonesian Government indicating that the majority of the financing of the project will come from private investors (Tarrant, 2014). These development opportunities are aimed at generating revenues to finance the engineering solutions. Once the NCICD has been approved, detailed designs and feasibility studies for each component will have to be prepared for implementation.

The NCICD master plan has been with the government since 2014 with progress affected by changes in political leadership and concerns with the 17-island reclamation project now halted due to corruption and environmental impact issues. In an interview with the Jakarta Post in March 2016 the secretary general of the National Water Resource Council, Untung Budi Santoso indicated that the government was reconsidering Phase B of the masterplan; the building of the Great Sea Wall. He indicated the hope that, with the implementation of Phase A of the master plan (the reinforcement of the existing sea wall infrastructure) there may not be the need for Phase B (Elyda, 2016).
However, in January 2017 it was reported at a presentation given by the Coordinating Maritime Affairs Minister, Luhut Pandjaitan, that the government would finance the Giant Sea Wall project on its own (Wardhani, 2017). Both these articles raise concerns about the progress and the future of the project. Assuming the master plan goes forward, there are still significant issues around project implementation that need to be considered and solved.

One matter demanding attention is the ability of both the governments involved and the private sector to tap the considerable scope for value capture. For example, success in reducing subsidence should appreciate land values. There is also the potential for revenue from sale or lease of islands within the wall. Effective exploitation of both has the potential to contribute materially to reduce the net cost to government of the overall project.

There is also the question of whether this configuration is the optimal one for addressing the water and subsistence problems. Colven (2017) has drawn attention to the long-standing preference for big engineering solutions for addressing flooding in Jakarta. In terms of PPP theory, there is an argument for specifying the desired outcomes and leaving it to the private sector to generate the most cost-effective solution. This would draw upon one of the strengths of PPPs – the indifference of the private provider to the mix of capital expense and operating expense. Governments have a tendency to maximise capital investment and minimise operating costs, in large part because of the way public funds are provided. The private sector’s interest lies solely in minimising total costs over the life of the concession.

In any event, this project presents formidable challenges which would test internal government PPP capabilities anywhere in the world. For Indonesia, with its limited experience of PPPs outside of toll roads, developing the internal skills needed to tender and successfully manage the contract for such an ambitious project presents the ultimate challenge.

4. CONCLUSION

This paper has argued that the criticality of management competencies for successful implementation of PPPs has been understated. Outside of toll roads, Indonesia has a limited number of successful PPPs notwithstanding a concerted effort by the national government to accelerate progress. A conventional wisdom about Indonesia’s slow progress in PPPs has been built up by largely by consultants, multi-lateral agencies and scholars which tends to treat all things – governance, corruption, transparency, administrative clarity and others – as equals.

To the extent they are addressed at all, management competencies usually get subsumed under the heading of ‘institutional capability’. Yet analyses of failed PPPs internationally have shown there is much more to management than that. Perversely, Indonesia’s slow progress has meant that it has not had the benefit of a truly failed PPP to drawn lessons from. The flagship PPP - the Batang Power Plant – is a creditable outcome but was relatively uncomplicated in that it involved a single seller and a single buyer, both of which have a long history in the energy supply business. No doubt, the ‘take or prey’ provision in the contract was important in bringing the project to fruition as it means that most of the commercial risk is under-written by the Government.

The debacles which occurred with Sydney’s Cross City Tunnel, London’s Underground and Taiwan’s High-Speed Rail have provided their nations with ample learnings. Many of these learnings have been internalised now to the point where the distinctive core competencies are embedded in both central and operating agencies. Their value is immense. The hope is that
Indonesia can acquire these capabilities without having to go through the same sort of dismal experiences that others have had to endure in order to learn.

6. REFERENCES


THE DEVELOPMENT OF MICRO, SMALL AND MEDIUM ENTERPRISES IN ASEAN AND THE ROLE OF CREDIT GUARANTEE FUNDS: CASE STUDIES OF INDONESIA AND VIETNAM

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ABSTRACT

Micro, small and medium enterprises (MSMEs) are playing very important role in socio-economic development of developing countries in the world and in Asean. They are not only having significant contribution to GDP, exportation, increase income for laborforce...but also create jobs, start-up and incubator for big business... However, MSMEs have been facing many difficulties, especially in financial aspect in their development process. In dealing with this particular constraint, credit guarantee funds are considered by many as a financing alternative. This article is based on a study examining the implementation of the credit guarantee funds in Indonesia and Vietnam. The study shows that critical factors for successful credit guarantee funds are including dissemination of the scheme to have a widely coverage of MSMEs, simple application procedure, incentives mechanism for channeling banks and guaranteed borrowers ... These findings are not only useful for Indonesia and Vietnam in MSMEs’ development process, but for other countries in Asean and different regions in the world also.

KEYWORDS: Micro, Small and Medium Enterprises (MSMEs); Credit Guarantee Funds; Financial Access; Start-up.

1. INTRODUCTION

Historically, MSMEs have always been the main players in domestic economic activities in the region, as the enterprises made up more than 90.0 per cent of all enterprises, generate between 50 to 95 per cent of total employment, and contribute between 30 to 53 per cent of gross domestic products (GDP) and between 19 to 31 per cent of export to the economies of member states. The role and importance of MSMEs, however, vary by member states, depending on many factors including current level of economic development; poverty; size of the economy; domestic market size, structure and development; economic and social structure; business climate; and government policies or regulations affecting directly or indirectly operations of existing firms or establishment of new firms.

However, despite their recognized importance and government supports through various programs, the enterprises (especially micro and small enterprises/MSEs) in the region are often hampered by many constraints to growth in size and to become more viable/efficient enterprises. Although, main constraints may differ by member state, or, within a member state, between rural and urban areas, between sectors and subsectors, or between individual enterprises within a sector, there are some common constraints to all MSMEs in all member states. They are including the lack of access to source of financing; shortage of human resource with high skills; lack of access to advanced technologies and up-date and comprehensive information;
difficulties in procuring raw materials and other required inputs, marketing and distribution; high transportation costs; problems caused by cumbersome and costly bureaucratic procedures, especially in getting the required licenses; and policies and regulations that generate market distortions. These are often said in the literature as external constraints to MSMEs growth.

It is generally agreed that adequate access to finance is crucial if MSMEs in the region are to survive and grow (ADB, 2014b). More importantly, access to finance is more crucial for local MSMEs to be able to compete in the era of 'ASEAN single market' with the implementation of the ASEAN Economic Community 2015. Therefore, in the past few years, many countries in Asean have launched public supported CGF as an important tool for improving MSMEs access to finance, in line with their national MSMEs development. The Funds are provided by specialized institutions, either partially sponsored or fully owned by the government, and with MSMEs as the main clients.

Although there is no universal prescription for increasing MSMEs access to finance, CGF is believed to play an important role in filling the MSME financing gap in many parts of the world, including in Southeast Asian region. Based on literature on CGF, a CGF can be defined generally as any formal scheme whereby an independent third party provides an effective guarantee to lenders.

2. RESEARCH METHODOLOGY

Aim of the Study

Based on this background, this study aims to examine the reality of MSMEs development and the implementation of CGFs in Indonesia and Vietnam. More specifically, this study aims to answer the following two questions:

1) What are main constraints of MSMEs in development process? Is it financial access is one of the key factors affect to MSMEs development?

2) How CGFs have been implemented and are they successful by looking at the number of MSMEs that have applied, been granted loans; range of sizes of the loans; default rates?

3) Learning from these two countries' experiences, what are the critical factors for successful CGFs?

Research Methodology

Given the nature of the study, its research methodology is a combination of: (i) desk-based research/secondary data analysis; and (ii) in-depth interviews with key officials of relevant government agencies and private organizations related to CGFs in Indonesia and Vietnam. In Indonesia, the agencies are Bank Rakyat Indonesia, a state-owned bank which is the leading bank in the implementation of KUR, a government sponsored CGS, the Ministry of Cooperative and Small Medium Enterprise, and Indonesian Chamber of Commerce and Industry. In Vietnam, the agencies/organizations are: Agency for Enterprise Development, Ministry of Planning and Investment (MPI), and Vietnam Chamber of Commerce and Industry (VCCI), Vietnam Small and Medium Enterprises Association (VINASME).
3. THE DEVELOPMENT OF MSMEs AND CREDIT GUARANTEE FUNDS IN VIETNAM

3.1. General of MSMEs development

The definition of small and medium enterprises is stipulated in Law on Support for Small- and Medium-sized Enterprises (SMEs) by Jun, 2017. As defined, SMEs that have business registration in accordance with law, is divided into three levels: micro, small and medium scale, basing on total capital (total capital equivalent to total assets determined in the balance sheet of enterprises) or number of employees per year, as follows:

**Table 1: Criteria for NSME classification**

<table>
<thead>
<tr>
<th>Scale</th>
<th>Sector</th>
<th>Micro enterprises</th>
<th>Small-sized enterprises</th>
<th>Medium-sized enterprises</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number of laborers</td>
<td>Total capital</td>
<td>Number of laborers</td>
</tr>
<tr>
<td>I. Agriculture, forestry and fishery</td>
<td>10 persons or fewer</td>
<td>VND 20 billion or less</td>
<td>Between over 10 persons and 200 persons</td>
<td>Between over VND 20 billion and VND 100 bil</td>
</tr>
<tr>
<td>II. Industry and construction</td>
<td>10 persons or fewer</td>
<td>VND 20 billion or less</td>
<td>Between over 10 persons and 200 persons</td>
<td>Between over VND 20 billion and VND 100 bil</td>
</tr>
<tr>
<td>III. Trade and service</td>
<td>10 persons or fewer</td>
<td>VND 10 billion or less</td>
<td>Between over 10 persons and 50 persons</td>
<td>Between over VND 10 billion and VND 50 bil</td>
</tr>
</tbody>
</table>

Source: Law on Support for Small- and Medium-sized Enterprises (SMEs), Jun 2017

In Viet Nam, in 2007 there were 143,622 MSMEs, or about 96.3 per cent of total enterprises in the country. The number increased every year which amounted to 393,928 units or almost 98.0 per cent in 2014 (Table 1). Their GDP contribution in that year was 40.0 per cent. The growth in the number of MSMEs has been slowing, with year-on-year growth of slightly above 5.0 per cent in 2014. MSMEs in Viet Nam consist of state-owned enterprises, or around 0.6 per cent of total MSMEs in 2011, non-state-owned enterprises (97.1%), and foreign invested enterprises (2.3%). Wholesale and retail trade is dominant in Viet Nam’s MSMEs in number, accounting for almost 40% of total MSMEs in 2012, followed by the service sector, including technology, accommodation, and food services (20.5%), and the manufacturing industry (15.7%) (ADB, 2014a; VCCI, 2015; Hung, at al., 2014).

**Table 2: MSMEs in Viet Nam, 2007-2014**

<table>
<thead>
<tr>
<th>Description</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2014*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of MSMEs</td>
<td>143,622</td>
<td>186,379</td>
<td>230,365</td>
<td>272,283</td>
<td>316,941</td>
<td>333,835</td>
<td>393,928</td>
</tr>
<tr>
<td>Percentage of total enterprises</td>
<td>96.3</td>
<td>97.0</td>
<td>97.4</td>
<td>97.5</td>
<td>97.6</td>
<td>97.7</td>
<td>97.9</td>
</tr>
<tr>
<td>Whole sale &amp; retail (% of total MSMEs)</td>
<td>41.5</td>
<td>42.3</td>
<td>41.4</td>
<td>40.9</td>
<td>40.3</td>
<td>39.8</td>
<td>…</td>
</tr>
<tr>
<td>Services (% of total MSMEs)</td>
<td>16.1</td>
<td>16.8</td>
<td>17.9</td>
<td>18.6</td>
<td>20.4</td>
<td>20.5</td>
<td>…</td>
</tr>
<tr>
<td>Manufacturing (% of total MSMEs)</td>
<td>18.6</td>
<td>18.2</td>
<td>17.5</td>
<td>15.7</td>
<td>15.7</td>
<td>15.7</td>
<td>5.4</td>
</tr>
</tbody>
</table>
Viet Nam has MSME lending data but these are not publicly available. The State Bank of Vietnam (the Central bank) only produces total bank loans outstanding for all enterprises. As of September 2013, the bank loans outstanding totaled 3,303 trillion Vietnam dong (VND) with a gradual increase and a non-performing loan (NPL) ratio of 4.62 per cent. The manufacturing sector is the most active borrower and accounted for 29.0 per cent of total loans outstanding in September 2013, followed by the wholesale and retail trade sector 18.8 per cent. Given that the most active sector in MSMEs is wholesale and retail trade, it is considered that MSMEs access to bank credit is limited (ADB, 2014a).

3.2. Financing support and the Credit Guarantee Funds for MSMEs development

At its Sixth Party Congress in 1986, the Vietnamese Communist Party launched the country's Economic Renovation (Doi Moi), marking the starting point of its reform and open-door era. In 1991, the private sector in Vietnam was legally recognized through the Law on Private Enterprises and the Law on Companies. Following that, the amended Constitution in 1992 allowed a "multi-sector economy in accordance with the market, based on state management and socialist orientations". The development of domestic enterprises has been promoted through the Law on Encouraging Domestic Investment adopted in 1994.

In November 23, 2001, for the first time since 1986, the Vietnamese Government promulgated "Supporting Policies for MSMEs development" with Decree No 90/2001/ND-CP establishing an official framework for government support in the development of MSMEs in Vietnam (Do and Pham, 2007).

The Vietnamese government's supporting policies on MSMEs consist of many programs, and to facilitate MSMEs’ access to finance, the government adopted various policies to support SMEs, including establishing credit guarantee funds (CGFs) for MSMEs; supporting financial institutions to increase credit for MSMEs; promoting financial consulting, investment management and other assistance services for MSMEs; assisting MSMEs in enhancing their capacity to prepare projects and business plans to meet the requirements of credit institutions; training for MSMEs; establishing MSME developmental fund financing by the state and other organizations within the country (Vo, et al., 2010).

Followed in Decision No 90/CP-2001, the Vietnamese Prime Minister (PM) signed Decision No 193/2001/QD-TTg on issuing Regulation on the Setting up, Organization and Operation of Credit Guarantee Funds (CGFs), although they do not direct to MSMEs, in December 20, 2001. Later on, this PM Decision has been replaced by a new one, i.e. PM Decision No.58/2013/QD-TTg on issuing the Regulation on the establishment, organization and operation of local CGF for MSMEs (HCGF, 2016). In this Decision, CGFs should be set up at the local (provincial and city) level by local CGFs, and managed by the local government, i.e. the Provincial People's Committees (Do and Pham, 2007; ADB, 2014a). Thus, based on this PM Decision, each province should have one CGF under the supervision of the Ministry of Finance, to whom the

| Total employment in MSMEs (million people) | 2.84 | 3.35 | 3.89 | 4.35 | 5.01 | 5.13 | 47.0 |
| Percentage of total employment | 39.2 | 42.1 | 44.7 | 44.2 | 46.0 | 46.8 | 40.0 |
| GDP Contribution (%) | ... | ... | ... | ... | ... | ... | ... |

provincial People’s Committees must submit regular reports (Freeman and Ngoc, 2007; ADB, 2014a).

Funding should come from five different sources: (i) the local government, i.e. provincial or municipal budgets through budget line with the Ministry of Finance (up to 30 per cent of total charter capital); (ii) banks/financial institutions; (iii) associations of MSMEs; (iv) foreign institutions, and (v) other institutions (Freeman and Ngoc, 2007; HCGF, 2016).

Credit guarantee criteria for local funds are the followings: (i) for MSMEs under current legal framework in all economic sectors, cooperatives and unions of cooperatives, individual business households as prescribed by the Government's Decree No.02/2000/ND-CP of February 3, 2000 on business registration, and farm owners, peasants' and fishermen's households' that carry out projects on aquaculture, offshore fishing, planting of industrial trees or husbandry; (ii) having feasible investment project/business plan, and being capable of repaying loan capital (the potential borrowers should be appraised and guarantee should be accepted by the local funds; (iii) minimum collateral: 15 per cent of the loan value; (iv) minimum 15 per cent capital owned by enterprises in the project; (v) the total value of the CGFs properties mortgaged or pledged at credit institutions is equal to at least 30 per cent of the loan value as prescribed by law; and (vi) owing no tax debts or overdue debts to credit institutions or other economic organizations (Do and Pham, 2007; HCGF, 2016).

By 2006, there were four (4) provincial CGFs. By 2011, 11 provinces have already established a CGF. In 2015 there are already 27 local CGF (Vo, et al, 2010; HCGF, 2016). In 2012, total credit guarantee fund was VND 2,976 billion, and increased to VND 3,796 billion in 2015 (HCGF, 2016). The central government requires that all 36 provinces in the country should have their own local CGF. But, many already established local CGFs have been found not active anymore. Based on conversations that Freeman and Ngoc (2007) had with some officials in Hanoi, they were told that most local CGFs have failed to genuinely commence meaningful operations.

The Vietnamese CGF model suffers from a number of difficulties and limitations to sustain or to operate effectively and efficiently. As also stated in HCGF (2016), the difficulties and limitations are including (i) limited capital available, as many provincial governments lack the budget revenues to meet the requirement of charter capital; (ii) local commercial banks and credit institutions are generally not interested to participate and reluctant to commit funds for many reasons, including the procedure is too complex; (iii) small operation scale; (iv) low risk reserve fund which is not enough to compensating the risk; (v) limited human and institutional capacity at the provincial level to establish and manage a CGF; (vi) enterprises and banks alike lack sufficient confidence in CGFs; (vi) unwelcome interference in the operations by local authorities; (vii) there is a somewhat ad hoc nature to the approach, with no appropriate and robust organization; (viii) the setting of a fixed (and relatively low) fee for CGF coverage will pose viability problems, and does not allow for differing degrees of risk associated with each borrower; (ix) some commercial banks, enterprises and local funds do not implement full responsibilities; (x) limited cooperation between parties involved in e.g. document appraisal, credit guarantee, capital disbursement, and loan supervision; (xi) guarantee fees are not enough for risk compensation; and many MSMEs do not meet criteria for credit guarantee (e.g. no or low profits, low enterprise competence).
In addition to the CGFs, to support enterprises in the country affected by the global financial crisis in 2008-2009, since 2009 the government has assigned the Vietnam Development Bank (VDB) to provide guarantees to enterprises' loans nationwide which are subject to underwriting loans at commercial banks (up to 85 per cent of project's total investment), funded by the state budget and not subject to the State Bank of Vietnam (MPI, 2015). The VDB has signed guarantee contracts with 20 commercial banks to implement the scheme (Kinasih, 2014). By November 2009 the VDB has guaranteed a total amount of VND 6,686 billion (or about US$ 370 million based on current exchange rate), across 68 projects and 871 short-term business plans (Vo, et al., 2010). In the first two years of its operation, the VDB issued credit guarantees to enterprises implementing investment projects to develop business (on loans for fixed assets) and business plans (on loans for working capital), with the exception of the fields of consultancy, real estate, securities, services (excluding freight services, education, and health), and a loan to pay the debt of other credit contracts (Vo, et al., 2010).

At least by 2014, the VDB has issued more than 1,500 guarantee deeds for enterprises, of which nearly 100 per cent were MSMEs, with a value of around VND 11,000 billion. Whereas, commercial banks have granted loans to enterprises totaling nearly VND 9,000 billion. The total amount that the VDB has repaid debts for mostly MSMEs from its guarantee task until February 2012 was VND 112 billion. At the same period, enterprises repaid their debts to the VND 4.7 billion, of which VND 4.5 billion were principal (MPI, 2015).

The VDB collects guarantee fees, 75 per cent of which are taken into credit guarantee risk provision and the remaining 25 per cent are considered as bank income. It has also issued letters of credit guarantee for MSMEs with loans at 39 commercial banks with a total value of VND9,975.23 billion ADB (2014a).

On October 31st, 2015, Lang Son Branch of the VDB launched the Lang Son credit guarantee Fund for MSME. The Fund, as a bridge connecting business to credit institutions, will provide MSMEs credit guarantee and thus help them to access to funding sources. Its operations are not-for-profit, ensuring self-reliance, capital safety and development. The Fund has initial charter capital of VND 38 billion, funded from Lang Son province local budget (VND 30 billion) and the rest from local enterprises. Applicants eligible to credit guarantee are local MSMEs meeting the following conditions: having project with minimum investment VND 2 billion or business plan cost up to VND 500 million. Project or business plan shall be efficient and bankable; their mortgage value at commercial bank represents at least 15 per cent of loan value; contribution from project owner at least 15 per cent equity of total investment; there are no overdue debt to state budget as well as no non-performing loans at commercial banks at the time of guarantee application submission. To each project and business plan, the maximum guarantee coverage does not exceed 70 per cent of the total investment; and for each client, 15 per cent of the Fund equity; total guaranteed outstanding does not exceed five times the actual charter capital of the Fund (http://en.vdb.gov.vn/news3101/vdb-branch-of-lang-son-entrusted-to-manage-credit-guarantee-activities-from-local-credit-guarantee-fund).

With respect to the default rate, although no official data are available, according to Mrs Bui Thu Thuy, the NPL of CGF in Vietnam is very low. Most likely lower than 4.62 percent of NPL of total bank loan in the country. In other words, the most problem of the implementation of CGF in Vietnam is from the supply-side (credit guarantee providers); not from the demand-side (such as moral hazard or financial mismanagement by the borrowers). As explained further by Mrs Bui Thu Thuy, in an effort to promote CGF, currently, VDB is drafting, for the first time, a
national law on MSMEs, which will be officially issued in 5 October 2016. The Law has a special chapter to promote CGF for MSMEs.

4. MSMEs AND CREDIT GUARANTEE FUNDS IN INDONESIA

4.1. General of MSMEs development

MSMEs in Indonesia are very numerous, amounting to almost 58 million in 2013 (Table 5). They have always been the main drivers of domestic economic activity in Indonesia, accounting for more than 99 per cent of all existing firms across sectors. Especially micro and small enterprises (MSEs), they generate a significant amount of not only primary but also in many cases, secondary income sources for low-income households. For instance, in many small or poor farm households, men (husband) work in the field while women (their wives) own small businesses at home making simple handicraft items or food products, or running small shops selling basic need items.

MSMEs' share of gross domestic product (GDP) has always been higher that that of LEs. In 2006, at constant market price, MSMEs contributed 58.49 per cent to the formation of Indonesian GDP, and the latest data which are available show that their share has increased slightly to 60.34 per cent. But this figure does not mean that the performance of this category of enterprises is much better than that of LEs. It is simply because the number of units of MSMEs is very huge. As in other countries, they are the majority of enterprises in Indonesia. This suggests thus that the level of labor productivity in MSEs is much lower as compared to that in LEs. Although not shown in this figure, within the MSMEs themselves, the GDP share of MSEs are always higher than that of MEs. Again, this is mainly because MSEs dominate MSMEs in term of number of units.

The majority of MSMEs in Indonesia are engaged in the agricultural sector, including animal husbandry, forestry, and fisheries. The second important sector for MSMEs is trade, hotel and restaurants, and within this sector, women as business owners are dominant in retail trade and restaurants (Table 4). In the manufacturing industry, Indonesian MSMEs are traditionally not as

Table 3: Total enterprises by size category in all economic sectors in Indonesia, 2009-2013

<table>
<thead>
<tr>
<th>Size category</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro enterprises (MIEs)</td>
<td>52,176,795</td>
<td>53,207,500</td>
<td>54,559,969</td>
<td>55,856,176</td>
<td>57,189,393</td>
</tr>
<tr>
<td>Small enterprises (SEs)</td>
<td>546,675</td>
<td>573,601</td>
<td>602,195</td>
<td>629,418</td>
<td>654,222</td>
</tr>
<tr>
<td>Medium enterprises (MEs)</td>
<td>41,133</td>
<td>42,631</td>
<td>44,280</td>
<td>48,997</td>
<td>52,106</td>
</tr>
<tr>
<td>Large enterprises (LEs)</td>
<td>4,677</td>
<td>4,838</td>
<td>4,952</td>
<td>4,968</td>
<td>5,066</td>
</tr>
<tr>
<td>Total</td>
<td>52,769,280</td>
<td>53,828,570</td>
<td>55,211,396</td>
<td>56,539,559</td>
<td>57,900,787</td>
</tr>
<tr>
<td>MSMEs to total (%)</td>
<td>99.9</td>
<td>99.9</td>
<td>99.9</td>
<td>99.9</td>
<td>99.9</td>
</tr>
<tr>
<td>MSMEs growth (%)</td>
<td>2.6</td>
<td>2.0</td>
<td>2.6</td>
<td>2.4</td>
<td>2.4</td>
</tr>
</tbody>
</table>

Sources: Menegkop & UKM (www.depkop.go.id) and BPS (www.bps.go.id).
strong compared to LEs or to MSMEs in Asian developed economies like Japan, Taiwan, and South Korea (where traditionally they are well presented in production linkages with LEs as suppliers or vendors, especially in the automotive, electronics, and machineries industries). This Indonesian structure of MSMEs by sector is, however, not unique to Indonesia. It is a key feature of this category of enterprises in developing countries, especially in countries where the level of industrialization and income per capita are relatively low. Within the industry manufacturing, units owned or managed by women are mainly found in food processing and handicraft industries.

Table 4: Distribution of MSMEs GDP by Key Sectors in Indonesia, 2007-2011 (%)

<table>
<thead>
<tr>
<th>Sector</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>24.4</td>
<td>26.1</td>
<td>27.4</td>
<td>27.8</td>
<td>23.5</td>
</tr>
<tr>
<td>Trade</td>
<td>27.1</td>
<td>25.5</td>
<td>24.2</td>
<td>24.4</td>
<td>26.7</td>
</tr>
<tr>
<td>Services</td>
<td>17.9</td>
<td>17.0</td>
<td>16.5</td>
<td>16.4</td>
<td>16.8</td>
</tr>
<tr>
<td>Transportation</td>
<td>6.4</td>
<td>5.9</td>
<td>5.5</td>
<td>5.5</td>
<td>5.1</td>
</tr>
<tr>
<td>Manufacturing industry</td>
<td>16.2</td>
<td>16.7</td>
<td>16.4</td>
<td>16.4</td>
<td>18.3</td>
</tr>
<tr>
<td>Others</td>
<td>8.0</td>
<td>8.8</td>
<td>9.9</td>
<td>9.6</td>
<td>9.6</td>
</tr>
</tbody>
</table>

Sources: Menegkop & UKM (www.depkop.go.id), BPS (www.bps.go.id).

As total number of MSME increases annually, total workers in the enterprises also grow every year. In 2013, MSMEs comprised 114.1 million employees or 97 per cent of the total workforce in the country, with 6 per cent growth from 2012 (Table 7). Of total employees in these enterprises, about 42.4 per cent worked in primary industry while 21.7 per cent worked in the trade sector, 11.7 per cent worked in manufacturing, and 10.5 per cent worked in the service sector in 2011. This sector composition of MSMEs in Indonesia has also not changed for a long time.

Table 5: Total Employment in MSMEs in Indonesia, 2007-2013

<table>
<thead>
<tr>
<th>Description</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSME employees (million people)</td>
<td>90,491.9</td>
<td>90,024.3</td>
<td>96,211.3</td>
<td>99,401.8</td>
<td>101,722.5</td>
<td>107,657.5</td>
<td>114,144.1</td>
</tr>
<tr>
<td>MSME employees to total employees (%)</td>
<td>97.3</td>
<td>97.2</td>
<td>97.3</td>
<td>97.2</td>
<td>97.2</td>
<td>97.2</td>
<td>97.0</td>
</tr>
<tr>
<td>MSME employee’s growth rate (%)</td>
<td>2.9</td>
<td>3.9</td>
<td>2.3</td>
<td>3.3</td>
<td>2.3</td>
<td>5.8</td>
<td>6.0</td>
</tr>
</tbody>
</table>

Sources: Menegkop & UKM (www.depkop.go.id), BPS (www.bps.go.id), ADB (2015)

4.2. Financing support and the Credit Guarantee Funds for MSMEs development

There are three types of credit from financial institutions in the country, namely for investment, working capital and consumption; the first two types are categorized as credit for businesses, and the third one as household credits. In Indonesia, of all banks that provide both business and household credits in various schemes, i.e. commercial banks, state-owned banks, rural banks, and regional development banks, BPR, BPD, and BRI, are the key financial institutions
providing loans. BPR is also known as a rural bank, people’s credit bank, smallholder credit bank, or second-tier bank to serve MSMEs, low income groups, and/or poor households. BPD is a regional or provincial development bank owned by provincial governments, and has a legal form that is now the same as that of a commercial bank. BRI has various credit schemes, including micro credit known as Kredit Umum Pedesaan (KUPEDES), or village/rural general credit, allocated through all BRI Unit Desa (village branches of BRI). KUPEDES is a general-purpose rural loan scheme with competitive interest rates. It offers loans (working capital and investment) to those who fulfill the requirements in all economic sectors, from businesses in agriculture, trade, industry, and services, to individual borrowers who require loans for education, house renovation, purchase of vehicles, etc. Table 6 shows total outstanding loans of commercial banks for businesses and households in the past few years.

**Table 6: Total Outstanding Loans from Commercial Banks in Indonesia, 2011-2016**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Working capital</td>
<td>1,068,676</td>
<td>1,316,689</td>
<td>1,585,659</td>
<td>1,757,449</td>
<td>1,916,256</td>
<td>1,839,577</td>
</tr>
<tr>
<td>Investment</td>
<td>464,262</td>
<td>591,425</td>
<td>798,157</td>
<td>903,194</td>
<td>1,035,889</td>
<td>1,036,399</td>
</tr>
<tr>
<td>Consumption</td>
<td>667,155</td>
<td>799,748</td>
<td>909,058</td>
<td>1,013,666</td>
<td>105,759</td>
<td>1,107,059</td>
</tr>
<tr>
<td>Total</td>
<td>2,200,094</td>
<td>2,707,862</td>
<td>3,292,874</td>
<td>3,674,308</td>
<td>4,057,904</td>
<td>3,983,035</td>
</tr>
</tbody>
</table>


Since January 2011, MSME credits have been calculated based on fair value in accordance with the MSME definition under the MSME Law No.20, 2008. The previous MSME credit data included unidentified financing for consumption purposes, and were based on the credit limit of banks. Since April 2013, only the fair-value-based MSME credit data are available (ADB, 2014a). As can be seen in Table 7, in 2011 with the old calculation system, total loans outstanding of MSMEs was approximately Rp1,151 trillion, compared to Rp479 trillion with the new system. By January 2016, MSME loans outstanding totaled around Rp719.2 trillion and accounted for 18.07 per cent of total commercial bank loans.

**Table 7: MSMEs Outstanding Loans from Commercial Banks in Indonesia, 2010-2016**

<table>
<thead>
<tr>
<th>Description</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016**</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSMEs loans (Rp bil.)</td>
<td>926,782</td>
<td>…</td>
<td>1,151,392</td>
<td>1,350,606</td>
<td>…</td>
<td>…</td>
<td>…</td>
</tr>
<tr>
<td>MSMEs loans (Rp.bil) *</td>
<td>479,887</td>
<td>552,226</td>
<td>639,472</td>
<td>671,721</td>
<td>…</td>
<td>…</td>
<td>739,801</td>
</tr>
<tr>
<td>Percentage of total loans (%)</td>
<td>52.48</td>
<td>50.95</td>
<td>39.91</td>
<td>…</td>
<td>…</td>
<td>…</td>
<td>719,199</td>
</tr>
<tr>
<td>Percentage of total loans (%)*</td>
<td>21.24</td>
<td>16.32</td>
<td>19.42</td>
<td>18.28</td>
<td>18.23</td>
<td>18.07</td>
<td></td>
</tr>
<tr>
<td>Total loans (Rp bil.)</td>
<td>…</td>
<td>21.24</td>
<td>16.32</td>
<td>19.42</td>
<td>18.28</td>
<td>18.23</td>
<td>18.07</td>
</tr>
</tbody>
</table>

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Credit guarantees are a popular instrument for credit enhancement in Indonesia, started in the early 1970s when two most important government-sponsored guarantee institutions, i.e. PT Asuransi Kredit Indonesia (Askrindo), and Perum Jamkrindo were established. Askrindo is owned 55 per cent by Bank Indonesia (BI) and the Ministry of Finance (45 per cent). They have been coping with MSME loan guarantees nationwide. The guarantee coverage ratio, which measures the share of qualifying loans guaranteed by an institution, is between 70 and 80 per cent (ADB, 2014b; Shim, 2006). In addition, another government-sponsored guarantee agency was established in 2000, i.e. Perum Sarana Pengembangan Usaha (Perum Sarana), and is 100 per cent government-owned. Its guarantee coverage is maximum 75 per cent.

In 2008, the Indonesian government issued Presidential Decree No.2/2008 on guarantee institutions and the Ministerial Regulations (the Ministry of Finance) No.222/2008 and No.99/2011 on guarantee institutions and re-guarantee institutions. These regulations are a legal basis for the guarantee business in Indonesia. Based on those regulations, licensed regional credit guarantee corporations, mainly owned by local governments, have been established in many provinces, including East Java, West Java, Bali, Riau, West Nusa Tenggara, and West Sumatra. In addition to these, a syariah based (Islamic) guarantee corporation, i.e. Penjaminan Pembiayaan Askrindo Syariah, owned by Askrindo, was also established on 28 December 2012 (ADB, 2014a).

The Indonesian government does put efforts to continuously improve the implementation of KUR, with various steps with the aim to (i) improve coordination among key, related ministries and other agencies, including regional government; (ii) encourage all key stakeholders, especially regional and local government, to be more active in supporting and promoting local MSMEs to make them ready as potential receivers of KUR; (iii) be more aggressive in publicizing and disseminating information about the scheme, including the application procedure and potential benefits. During the series of FGDs in the three cities, both the bank (i.e. BRI); Kantor Dinas of Cooperative and SME, and Industry; business association; and other participants all agree that efforts to socialize KUR until now are still not yet optimal; and (iv) facilitate coordination between the implementing banks and KUR companies which provide guarantees (Tambunan, 2015). Also, the government has a plan to reduce the interest rate for KUR micro from currently 9 per cent to 7 per cent; probably next year (2017) (Kompas, 2016).

Many people have assessed KUR as a successful microfinance program, especially for MSEs. In October 2012, President Susilo Bambang Yudhoyono was awarded “Letter of Recognition” by the International Micro Finance Community for his successful implementation of KUR and microfinance in general, in Indonesia. The success of KUR is indeed not unrelated to the internationally-recognized success of Indonesia, and BRI in implementing microfinance. Therefore, Indonesia has been mentioned as a potential “world laboratory” for microfinance (Tambunan, 2014).

| 1,765,845 | 2,259,862 | 3,384,230 | 3,292,874 | 3,674,308 | 4,057,904 | 3,983,035 |

Note: * based on fair value since 2011; ** January

Sources: ADB (2014a) and OJK (statistik perbankan Indonesia), January 2016 http://www.ojk.go.id/id/kanal/perbankan/data-dan-statistik/statistik-perbankan-indonesia/Pages/Statistik-Perbankan-Indonesia-Januari-2016.aspx)
5. CONCLUSION

For financing institutions and government, should be:

Dissemination to have a widely coverage of MSME. In Indonesia, for instance, in the past few years BRI has adopted a digital online system in the process of KUR application. With this system, a potential borrower does not need to find or to go to a local BRI office; she/he simply uses hand phone to apply. Simple application procedure, especially for MSEs' owners who in general are low educated, they are more difficult to understand the banking procedures. Moreover, as a key characteristic of MSEs, especially in developing countries, owners of MSEs in general do all day-to-day tasks of their businesses (e.g. marketing, procurement of raw materials, production, and financing) that makes them difficult to leave their factories or workshops;

Incentives mechanism for guaranteed borrowers should be put in place to mitigate or to prevent them from 'moral hazard'. Possible incentives are such as easier procedure for the next application or longer debt repayment period. In addition, from interviews with resource persons in some member states, it was commonly stated that collateral requirement, i.e. percentage stake each borrower puts at risk, should not be set to zero, as it may also serve as a tool to mitigate moral hazard problem at the borrower level. It could also help screen safe from risky borrowers;

Incentives mechanism for the channeling banks (e.g. tax deductible) should also be put in place not only to maintain their vigorous credit assessment, monitoring credit quality of guaranteed borrowers and collection of debt repayment, but also to provide full assistance to guaranteed borrowers in managing their finance. With respect to bank assistance, according to an official from BRI, one key to the success in maintaining the NPL remains low is the full assistance provided by BRI to their guaranteed MSMEs in running their businesses, especially with respect to their financial management;

Structure and institutional arrangements that take account of both adverse selection and moral hazard. This is crucial because a CGS does not reallocate risk between borrowers and banks, but to the guarantee agent instead so that the CGS reduces the overall risk faced by the two parties and it does not alleviate 'moral hazard'. This may explain, among other factors, why loans backed by credit guarantees in some member states have high NPLs;

Credit guarantee mechanism. Because of information asymmetry, not well-designed credit guarantee mechanism might cause the moral hazard. Borrowers may have high incentive to default since part of collateral, fulfilled by a credit guarantee agent, is not belonged to them (the loss because of their default will be covered by the guarantee agents). A good well-designed credit guarantee mechanism includes how incentives and sanctions are set, how the fund is governed, risk-based pricing, and risk management mechanisms;

Spread evenly to the entire country that all MSMEs in all parts of the country have the same opportunity to be granted by the scheme. In Indonesia, although all banks owned by both the state and regional governments are channeling KUR, BRI is the leading bank because of its advantages over the other state-owned banks, including having local offices in all over the country not only at the district but also at the village level; especially in the western part of the country;
Last but not least is Data on MSMEs financial condition. In many countries, MSMEs’ financial statements are generally not audited or even do not exist in most MSMEs, especially MSEs. So, it is difficult for banks to conduct risk assessment for MSME borrowers due to the availability and limited reliability of data. Thus, the centralized data of MSME are also crucial for the successful of a CGS implementation;

For MSMEs itself:

Willingness and readiness to participate. As banks to participate in a CGS are voluntary, their willingness to participate is thus highly dependent on their trust to the scheme. In Indonesia, no problems with the participation of banks have been found. Differently, in Vietnam, from interviews with the resource persons, it reveals that low trust from local banks seemed to be among various constraints in launching the scheme; prepare business plan very carefully and try to get good relationship with financing institutions before applying.

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THE INFLUENCE OF BUDDHISM IN JAPANESE FUNERAL CUSTOMS AND PRACTICES

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ABSTRACT
Funeral ritual called sōgi is a traditional ceremony that is considered sacred by the Japanese. In modern Japanese, most funerals are held in Buddhist style, and there are a great many strict customs to be followed both during and after funerals. However, Japanese funerals are based on an ancient way of thinking derived from Shinto which requires respect and honor for the souls of one’s ancestors. Buddhism and Shinto have advantages that can complement each other. The flexible nature of the Shinto religion is an entry factor of the teachings of Buddhism in Japanese society's belief. Through literature review method of various sources or studies, we can find out clearly the role of Buddhism and Shinto mortuary services or funeral procession. There are many things to consider or be noted during the funeral, for example; deciding on the date of the funeral, the water of the time of death and cleaning deceased, clothes and makeup for the deceased, laying out the death person, upside-down things, pillow side decoration, a posthumus name, the coffin, the wake, and the funeral procession.

Key words: Buddhism, death, japanese, funeral, ritual

1. INTRODUCTION

Japan was once a country with a low level of cultural diversity. Yet, since the influx of Buddhism from China and other foreign countries, periodic cultural acculturation takes place. Nonetheless, the Japanese are still trying to preserve their indigenous culture by filtering out the foreign cultures that enter the country. When Buddhism arrived in Japan from China, the religion had further developed, from the ins and outs of its ceremony and various other aspects (Beasley, 2003: 49).

In past, China was once regarded as an advanced country and made a qibla by Japan in various fields such as art, culture, education and others. One of them can be seen through the customs of funeral ceremony in Japan which is still thick with the feel of Buddha, although Japan is known as a country whose society dominantly adhere to the teachings of Shinto. Therefore, it is important to know how far the influence of Buddhism on Japanese funerals today, what is the reason Buddhism can be accepted and collaborate with Shinto religion, and how the rituals that must be performed during and after the death ceremony.

This paper will describe about the influence of Buddhism in the funeral process of Japanese society, as well as things to note in the death ceremony. The purpose of this article is to describe an implicit cultural shift in activities related to the funeral procession and the sacred service to the dead in modern Japanese society. The next purpose is to describe the stages after and during the death ceremony. Thus, it will be clearly seen to what extent the role of Buddhism in the sacred ceremony and what the reasons of Buddhism may coexist with the Shinto religion.
2. METHODS

The literature review method used in writing this article is in the form of studies contained from various sources such as books, articles in journals, internet and so forth. Through the method, article writing is the result of a study of the various descriptions, studies and thoughts of previous authors from various sources related to the phenomenon of death ceremony in Japanese society.

3. RESULTS AND DISCUSSION
3.1. The Influence of Buddha Teachings in Death Ceremony in Japan

Among few religions adopted by the Japanese, Shintoism is the oldest and can be regarded as the indigenous religion of Japan. In contrast to Buddhism, Confucianism, Catholicism, Protestantism, and Islam, which came later in the prehistoric and historical periods; Shinto religion is not known when it began to emerge (Danandjaja, 1997: 164).

Buddhism entered Japan from India through China and Korea in the mid-sixth century (538 AD) and gained support from the emperor and disseminated by the rulers to all corners of the country (The International Society for Educational Information Inc., 1989: 114). At that time, Buddhism received a warm welcome and has a special attraction for the Japanese, until the Chinese culture can be easily accepted without getting extreme rejection. As time went on, the influence of Buddhism became widespread enough to coincide with the Shinto teachings. Shinto and Buddhism seem to contradict, but the fact, both of these are interrelated each other.

Buddhism in the period of feudalism, although still fully based on Chinese doctrine, no longer uses difficult language, so it is easy to be understood by ordinary people (Beasley, 2003: 119). The conveniences offered by Buddhism were gradually accepted and applied in the life of Japanese society. Davies and Ikeno (2002: 201-202) argue that Shinto is not a hard teaching so Shinto can be combined with the Buddha teachings without any problems. As a result, funeral ceremony in Japan performed in modern Buddhist style is still strongly influenced by the Shinto traditions.

Walter (2009: 249) emphasized, in ancient Japan, corpses were often treated with fear, and contact with the dead required scrupulous ritual purification. The association of Buddhism with cremation helped to promote this method of disposal among elites. Walter explained although cremation did not become a universal practice until the late nineteenth century, after Dosho’s cremation, several emperors in succession were cremated in the eighth century, and this became the preferred method of disposal among the aristocracy. However, it does not mean that all Japanese people nowadays agree with the Buddhist-style death ceremony. This can be seen from the fact that cremation is not a Japanese culture. Formerly, burial in Japan was performed by burial on the ground (burial), but with the introduction of Buddhism, cremation was introduced even if it is only performed by Buddhist priests and onbō people who are aristocrats or high officials. Thus, it can be said that cremation is not mandatory. Here is a quote on the cultural conditions in Japan.

“Shinto coexists with Buddhism and sometimes overlaps with the Buddha in the issue of people’s thinking. Many Japanese today attend Shinto ceremonies at weddings, and Buddhist ceremonies at died people.” (The International Society for Educational Information Inc., 1989: 114)
Kaga Noboru (in Hamzon, 2007: 146) states that graves in contemporary Japanese concepts are a place to plant corpses or bones as well as a place of spiritual worship. If you look at Kaga Noboru’s statement, then either burial in the ground or cremation can be said to be natural in Japanese society. Because the bones are the result of the cremation process in which the bodies of the dead are gone because they are burned or formed due to the process of decaying the dead in the cemetery for a very long period of time. In fact, the synthesis of Shinto teachings is not only focused on the influence of the Buddha. Not only in recycling sites, in religious rites is the same. During the new year (hatsumode) Japanese people visit Shinto temple (jinggu). Then, on February 14 they celebrate Valentine’s Day, in March and September they celebrate Higan, and in the middle of the month, they celebrate Obon. Not only that, most people also celebrate at Christmas and New Year.

Although Shinto is referred to as the ancestral religion of the Japanese, but in its practice, Japanese Society does not only apply Shinto teachings only in their daily lives. One of the reasons why Buddhism was successfully invested in Japan is Mahayana Buddhism and Shinto share the same belief in the ancestor’s soul. The majority of Japanese people follow these two teachings. Now, the Buddhist ritual for the death ceremony, Bon Odori festival, Equinox Week are set in Japan, and many rituals involve thinking on ancestor worship344 (Davies and Ikeno, 2002: 203).

Now the cemetery funeral is acceptable to the Japanese population without any refusal at all. This can be proved from the statistical data of 2005 which states that all the funeral 99.89% performed by cremation. Christians in Japan were cremated, but death forms and rituals remained in different ways.345 In rapidly aging Japan, where most bodies are cremated, there are sometimes waiting lists at crematoriums. It can take a week or more before a slot is available, especially in urban areas.346 This suggests that with increasing interest in cremation practices, many emerging services such as hotel corpses as solve the problem.

3.2. Funeral Ceremony of Modern Japanese

Funeral ceremony in Japan is very expensive. This is influenced by the lack of vacant land in Japan. The land price for the cemetery ranged from 2 million yen (Rp. 235 million) to 7 million yen. Even this does not include the price of tombstones to millions of yen and must pay an administrative fee up to 50 thousand yen each year. However, tombstones can be used for generations by every family. Not only the burial ground, the death ceremony is also expensive. The family of the deceased must provide 2 million yen for the cost of the custodial monk from cremation, praying for the soul, to putting ash into the gravestone. Nevertheless, the death ceremony must still be executed in honor of the soul of the deceased.

According to Kenney and Gilday (2000: 167), there are two disclaimers that are deemed to be related to the funeral ritual.

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344. The worship of ancestral spirits is often performed by the majority of Shinto Japanese people. They believe in the presence of the gods and the spirits of the ancestors. It is the same with Buddhist teachings that believe in the gods of the universe. Buddhism also respects the spirit of the ancestors, and assumes that the deceased human will become incarnate in another form.


“...First, this is a skeletal outline of the most basic and enduring elements of Buddhist mortuary rites. Only rituals are listed: activities such as notifying relatives, getting the death certificate, securing permission for cremation, keeping track of mourners and their money, and sending thank-you gifts are not included. Second, it is imposibble to capture fully the variety of Buddhist funerals.”

Kenney and Gilday say that in Japan, there are many sects with diverse books and rituals, for example *Soka Gakkai*, a religious group that performs rituals without the presence of a priest. These number of religious or sects phenomena in Japan, could be the trigger of the emergence of variations in the death ceremony.

Here are the things that need to be considered in the death ceremony taken from the book *The Japanese Mind: Understanding Contemporary Japanese Culture*:

1) Determining the date of the death ceremony

When a family is left dead by their member, then they must perform *karitsuya* and *hontsuya*. *Karitsuya* is a night watch usually performed by close relatives of the deceased, while *hontsuya* is the designation for the next night. The death ceremony takes place two days later. However, if this happens at the beginning and the end of the year, or *tomobiki* day, then the ceremony is postponed. *Tomobiki* is believed to be a frightening day because the spirits of the dead are feared to bring friends or close family members to the afterlife. In Japan, there are six days which are believed to bring unlucky related death ceremony, they are: senso, tomobiki, senbu, butsumetsu, taian, and shakkō

2) Water of end of life and bathe the dead (*matsugo no mizu to yukan*)

The family of the deceased wets the mouth of the body with a damp cotton clamped with chopsticks. This process is first performed by the closest relatives, and then followed by other members with the same kinship. Then the corpse is bathed using warm water before being buried. Usually, it is performed by the family guided by the head of the funeral management.

3) Clothing and makeup for the deceased (*kyōkatabira to shini genshō*)

Furthermore, the body of the corpse wrapped with white kimono cloth. White kimono position is always placed with the right side that overlaps with the left side, both hands and wrists wrapped with t-shirts, and the heels of the corpse is fitted with straw sandals. The tasbih was tied to a corpse's hand, then a holster containing six old coins as a shoulder bag bag tied around the neck, and a white triangle cloth around the head. After that, the fingernails and the footnails of the corpse are cut off before finally being made up.

4) Laying the corpse

The body of the corpse is placed on the altar of Buddha or Japanese style room inside the house of the corpse. The head of the corpse is placed facing north and the face to the west, like a Buddha when he dies. The hand of the corpse put together above the chest and arranged as if he was holding his hand to pray. The cotton blanket is put on top of his body and his face is covered with a white cloth.

5) The opposite behavior (*sakasa goto*)

*Sakasa goto* is performed according to Buddhist custom. Goods used by the deceased will be put in reverse. For example, putting the right side of the kimono above the left side, pouring hot water in cold water until nail warm, and putting a cotton quilt on the body. It is unnatural and can be said to be taboo because it is contrary to everyday rules.
6) Decorating pillows (*makura kazari*)

*Makura kazari* is a process when a small table is covered with a white cloth and placed on the side of the cushion of the dead. Then an incense is burnt, a candle and a chrysanthemum flower (*shikimi*) are arranged on the table. Chopsticks are placed in a vertical position on top of a bowl of rice used during the deceased’s life and a ball cake made from rice powder is also placed on a table on a piece of white paper.

7) Posthumous name (*kaimyō*)

*Kaimyō* is the name given by the Buddhist monks to the deceased. The name is given by name during the deceased’s life and achievement or character.

8) Coffin (*hitsugi*)

One square meter of white cotton is placed in the base of the coffin before the corpse is placed on it. Then, the favorite objects of the deceased are placed in the coffin, except the objects of glass or metal because the corpse’s body will be cremated. The coffin is coated with gold *brocade* cloth.

9) Wake up all night (*tsuya*)

In this condition, the grieving family spent the night by looking at the corpse’s body in the trunk, and keeping the incense burning all night long. They perform *karitsuya* on the death day and *hontsuya* on the next day. It usually takes about an hour and takes place at six o’clock. That night, the head of the corpse’s accompanist recites sutra and performs the incense burning ritual (*shōkō*).

10) Death ceremony

Before the ceremony begins, family, relatives, and others are waiting in the hall. The Buddhist priest provides candles on the altar, burns incense, and recites sutra. Then, he reads the praise for the deceased and the agenda of reading telegram as a sympathy. After that the priest performs *shōkō* and recites sutra again followed by the audience in the hall. Things to note in the ceremony are black clothes for mourning, tasbih, mourning money (*kōden*), *shōkō*, and altar device. Clothes worn are usually dark or black. Women are not allowed to wear accessories other than pearls. While praying at the altar, the mourners lower their heads with hands flanking the beads, then take the brown powder with thumb, forefinger, and middle finger. Then lift the incense on top of the head while bowing and put the incense into an incense burning brazier before returning to the seat.

11) Burial process

After the death ceremony, the bereaved family and the cemetery board lift the coffin from the altar and close the coffin. The coffin is then transported by a hearse to be cremated. Followed by mourners while carrying photos and *mortuary tablet*.

12) Cremation (*kasō*)

The family carries the corpse’s photos and *mortuary tablet* to be cremated. After being cremated, a pair of corpse board put the ashes in a jar with a chopstick from bamboo. The jar was placed in a box covered with a white cloth, and carried by the head of the corpse board to the corpse’s house to be placed on the altar of the house for forty-nine days after death.

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347 Generally, the Japanese believe that spirits do not exist in everyday environments, but the spirits come to see humans when they are called in a memorial service performed to honor their ancestors. The spirits have been considered to emerge with the help of certain media such as morgue tablets, dagoba, tombstones and so forth. Plain wood tablets will be replaced with black lacquered tablets when the mourning period ends ([http://www.osoushiki-plaza.com/eng/eng3.html](http://www.osoushiki-plaza.com/eng/eng3.html), accessed on 5 Juli).
Kenney and Gilday (2000:171) say only the priest, relatives, and close friends attend the cremation. Inside the crematorium, usually right near the oven door, a table is set up. On the table are placed the memorial tablet, the photo, a candle, incense, and flowers. The coffin is placed on a moving cart, about waist height. The priest chants sutras: the mourners light incense. Then the coffin is moved into oven. The body takes about one hour to burn. During that time, the mourners may go to a separate room to drink tea or sake and eat a little food. When the cremation is finished, the oven doors are opened, and the cart is rolled back out. The wooden coffin has been burned away, and bones and ashes remain.

3.3 Modern Custom After Death Ceremony

Custom held after someone dies has a deep meaning to both family and relatives of the deceased. In modern Japanese custom, after the death ceremony ends, there is still a series of rituals performed.

“After the corpse is cremated, the deceased bones are collected and placed inside a small funerary urn called kotsutsubo to be brought home and buried later. Every seven days until the forty-ninth day, there is a ceremony around the altar where the ash funerary urn is .... Hereinafter, there is the annual ceremony, i.e. in the 1st, 2nd, 6th, 12th, 16th, and the 32nd, on the spring equinox and autumn equinox at the bon folk party.” (Dhanandjadja, 1997: 351)

In Shinto, it is said that death is a dirty thing. Something used to be considered dirty is not only people who died, but the family is also considered unholy. As a result, the Shinto altar is closed using white paper during the mourning period. Therefore, those who conduct funeral affairs and those concerning death are the 3rd party. However, now the family is directly involved in matters concerning the death of his family (Davies & Ikeno, 2002: 212).

When mourning the corpse, there is a tradition to bring mourning money as a sympathy for families left by a member of family (kōden). Forty-nine days after death, the grieving family gives a thank-you note accompanied by returning half of the portion of kōden ever given by mourners (kōden gaeshi). Actually, this tradition in Japan does not only happen in the death ceremony, but at the time of visiting the sick, the birth of a baby, marriage and some other conditions. In Japan, there is a tradition of reciprocity in giving gifts between the giver and the recipient as gratitude and as gratitude for having sympathized. Here is a quote that supports the statement about the traditions of Japanese society above.

“Mimai or gifts of sympathy are offered on occasions of distress an misfortune such as fire, earthquake, robbery. Gifts are called kōden are offered at funerals and returned with kaeshi or simply ‘return gifts’. Gifts for wedding or kekkon iwai also have a kaeshi.” (Angel , 1999: 28-29)

Davies and Ikeno (2002: 213-214) explains that in Japan, there is also Bon Odori festival which is the activity of the Japanese community of Buddhists. In the event, it is believed that the dead spirits return to their homes. Bon Odori festival generally begins August 13 and ends on 16 August. Before the festival is held, altars and tombs are cleared, vegetables and fruits and favorite foods of deceased persons and ancestors are also prepared. The reception
is done by lighting a fire at the gate of the house in the afternoon of the first day. Similarly, the last day is said as the day to bring the spirits back to the afterlife.

4. CONCLUSION

The introduction of Buddhism has brought tremendous influence in Japanese society. One of the influences is seen in the funeral of Japanese society which is mostly performed according to Buddhism although the original Japanese religion is Shinto. Shinto is a religion that is already rooted in animistic beliefs of ancient Japanese people. In the short, Buddha completely different sphere from Shinto as national faith of Japan. Yet, the character of the Buddha’s teachings is considered to be quite compatible with the person or belief of Japanese society, that is, to believe there are many gods in the universe. Buddhism in Japan also includes Mahayana Buddhism in East Asia which generally teaches salvation for all people, and there are times when it complements the Shinto teachings which are flexible and have no strict rules. Through literature review method of various sources or studies, found out clearly the role of Buddhism and Shinto mortuary services or funeral procession. There are many things to consider or be noted during the funeral, for example; deciding on the date of the funeral, the time of death and cleaning deceased, clothes and makeup for the deceased, laying out the death person, upside-down things, pillow side decoration, a posthumous name, the coffin, the wake, and the funeral procession. The number of religious phenomena in Japan, could be the trigger of the emergence of variations in the ceremony of death.

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An Ethnographic Study on the Role of Caregiver in Providing Care for Older Persons in Citengah Village, Sumedang, West Java, Indonesia

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Abstract

Background: The increasing proportion of older persons in Indonesia brings an impact on providing care for older persons especially for older persons who are no longer working. Most of study on the elderly are focused on elderly’s social activities. However, there are limited studies on the providing care for the elderly in rural areas in Indonesia.

Aims: To analyse people’s preferences concerning appropriate sources of care in the light of their own understandings of kinship, morality and personhood, to identify the range of acceptable care arrangements around the general norm of ‘daughter preference’, to examine the constraints operating on people’s attainment of preferred practices., and describe some implications that related to the role of caregiver.

Sample: The participants were caregivers who were aged under 60 year-old and older persons who were aged 60+.

Method: This study is a small scale study, based on qualitative research in Citengah Village, Sumedang, West Java, Indonesia. Ethnographic studies, analysis of elderly people’s life histories, in-depth interviews, and focus group discussion were conducted in the village. Repeated in-depth interviews also conducted with 29 participants.

Results: The results showed that there is a flexibility in Citengah Village when older people were asked about who they wanted to care for them when ill or frail. For men, reliance on a wife or a daughter is clearly preferred, while women often state a preference for care by a daughter. However, for both men and women care by a daughter-in-law, granddaughter, adopted child or even son or nephew is acceptable.

Conclusion: Caregiver played important roles in providing companionship, help and health care for elderly people. In relation to this, most caregivers were children or family of the elderly people. Further research is needed in order to increase capability of the caregiver.

Keywords: ethnographic study, older persons, caregiver, rural, Indonesia
**Introduction**

Many countries in the world will experience increasingly ageing populations in the 21st century. As the world experiences a demographic revolution towards a new era of ageing, comprehensive reforms to address social, fiscal, and health implications will be required. Yet while these impacts of ageing populations have largely focused on the developed world, the issue is also experienced by developing countries.

Literature has noted that the proportion of elderly people aged 60 years and above in the developing world will increase rapidly from 8% in 2005 to approx. 20% between 2015 - 2050 (Beard and Kunhariwibowo, 2001; United Nations, 2005). One of the developing countries that will experience these problems with its ageing population is Indonesia. This country has the third largest ageing population in the developing regions.

Indonesia will have 13.2% of elderly proportion in 2025: 7.8% of elderly people population is on the island of Java and 5.4% of older persons proportion is outside this island (Beard and Kunhariwibowo, 2001; United Nations, 2005). Also, there is an increasing in life expectancy from 45.7 years in 1970, to 65.4 in 2000, 69.9 in 2015, and 76.9 years in 2050. Additionally, there is also an increasing in number of old people 60+, from 4.9 million in 1950, to 21.4 m in 2010 and to 79.8 in 2050. In this case, the older population in Indonesia can be divided to young, middle & grand-old people as seen in graph 2.
Decomposing the old population by age is convenient for policy making and appropriate program targeting to beneficiaries. The young-old populations are expected to be still potentials, active and productive. Many of the middle-old populations maybe still potentials and productive, although many more have physical and health problems. The grand-old populations are those who need more care, attention toward their physical and mental health, and even many of them have to be rescued due to the absent of social security, family support or no retirement home to take care of them.

This paper explores data from Ageing in Indonesia study of a rural West Javanese community. The aims of this paper were to analyse people’s preferences concerning appropriate sources of care in the light of their own understandings of kinship, morality and personhood, to identify the range of acceptable care arrangements around the general norm of ‘daughter preference’, to examine the constraints operating on people’s attainment of preferred practices., and describe some implications that related to the role of caregiver.

This paper employs qualitative methods. Ethnographic studies, analysis of elderly people’s life histories, in-depth interviews, and focus group discussion were conducted in the village. The participants were caregivers who were aged under 60 year-old and older persons who were aged 60+. In addition, repeated in-depth interviews also conducted with 28 or 29 participants.

The Location
The location, Citengah village, is about 11 km away from the Sumedang city. The village was chosen because there is a remarkably high proportion of elderly people who are above 60 years old in this community. Citengah is a typical traditional West Javanese (Sundanese) village. Its local economy is predominantly based on agricultural production, with the majority of households (90%) engaged in rice cultivation. Simple irrigated sawah (paddy fields) for the production of rice, cassava, beans and tea trees are developed. The main activities are subsistence farming and agricultural wage labourer. Some people grow additional cash crops, usually the same products as for consumption, and own fishponds, cattle and poultry. The sole secondary industry comprises one small timber factory. Services within the community consist of two schools, 4 mosques, 5 prayer houses (musholla), 20 small stores, 2 village nurses (one female nurse or bidan desa and one male nurse or mantri), and 1 polindes (village medical clinic). The total population is recorded as 1200 people, with 143 people are 60 years of age and above. All inhabitants are Muslim.

Religious Adherence

Islam is important in Citengah. It is a visible presence in the life of Citengah village. Informal religious instruction for children begins with the instruction in Koran recitation (pangaosan). Calls to the five daily prayers, often heard from mosques in the village. Every Friday men and boys join the prayer known as Juma’ahan. Militant Islam is also important to the village. Citengah was one of the areas in West Java where the DI/TII or militant Islamic movement built its headquarter in Citengah’s forest.

Islam is also integrated into the life of people in Citengah. Important aspects of Islamic faith and practice that has implications for care giving is the fact that Islam requires practices associated with care and positive views of life that stresses on respect and caring for older persons. The practices are part of everyday life.

The norms in Citengah emphasise on the importance of religious aspect in people’s lives. One of participants was an honourable mullah and Islamic teacher in the village. He has been head of Citengah High mosque for approximately 18 years. Religion is one of the most important things in his life; he regularly attended religious events, and was anxious to keep Muslim laws (for example, he said it was necessary to take care of the older persons when they were getting older and older as it was a part of practicing Islamic values). Another participants received care from the village community in form of companionship. Village community also providing care for them inform of helping them with their activities of daily living such as dressing, feeding, washing, and toileting.

I would interpret these as symbolize of respect to older people. The caring that they receive do not automatically reduce their status in the village. Villagers still see them as old people to whom you should respect.

Care Preferences and Practices
There is a flexibility in Citengah when older people were asked about who they wanted to care for them when ill or frail. For men, reliance on a wife or a daughter is clearly preferred, while women often state a preference for care by a daughter. Sometimes remarriage will be done by older men in order to have a wife to care for them. However, for both men and women care by a daughter-in-law, granddaughter, adopted child or even son or nephew is acceptable, especially if a daughter is not locally available or relations are not good. One rich elderly widower, who has six sons and one daughter, explained his decision to live with his only daughter after his wife’s death with the comment: “With a daughter, I need not feel like a stranger (asing), nor reluctant (sungkan) to ask her to do my laundry or cook my favourite food.”

For elderly men, where there is a wife (and often there is), she is by default the predominant carer. Indeed, in Citengah, a wife’s role for ensuring men’s domestic comfort and care in illness is recognised as so important that remarriage, even in old age, is not uncommon. Only if there is no wife do daughters emerge as caregivers. Care by a daughter is most common, but granddaughters, sons, and daughters-in-law also feature prominently.

**The Voice of Caregiver**

In Citengah, the care of the elderly would have been spread around different members of the family. Most people had large families that stayed in the village or they married into villages that were close by. The number of carers was therefore greater and old people could move between the homes of sons or daughters, or remain in their own home (which would be in the same hamlet or compound) with family members able to visit regularly, provide food and easily attend to the needs of their parent(s). In this way being caregivers were seen as the obligations that was enacted in everyday existence. Being a caregiver is meaning to fulfill the moral and social obligations to the parents.

Today the number of children who remain living close by to a parent is lower than in the past. Some had only one child nearby, one had none. It was found that most participants had one person (usually one of their children) who took care of them. Additionally, some of the caregivers admitted that caregiving is rarely a pleasant task. Close family members will nonetheless usually provide it, be it out of obligation, affection, reciprocity or guilt. More distant kin and neighbours are typically not bound by a strong sense of duty or necessarily even fondness, and once an exchange relationship becomes heavily imbalanced by the overdependence of one party on the other, the commitment to care can quickly dissolve. The result can be sequential shifts in the identity of carers, as the ‘caring capacity’ (to use Keating et al’s term) of network members is quickly exhausted, and can ultimately lead to the breakdown of a person’s care arrangement and their untimely, degrading death.

**Conclusions and Implications**

The discussion has highlighted some aspects as follows. The research shows that many participants faced problems associated with modernisation and economic change, in particular the issues of reduced familial care. The study also examined the care preferences and practices of older men and women in Citengah. The aims were to analyse people’s preferences
concerning appropriate sources of care in the light of their own understandings of kinship, morality and personhood, to identify the range of acceptable care arrangements around the general norm of ‘daughter preference’, to examine the constraints operating on people’s attainment of preferred practices. The research confirmed the extent of daughter preference related to the kinship systems, and socially acceptable alternatives to care by a daughter existed and were enacted. Further research is needed in order to increase capability of the caregiver.

From the description above, there are some implications that can be stated: 1). higher educational institutions should act as a key for driving knowledge to confront challenges of the increasing of older population, and 2). theoretical training in health and social care should be paralleled with practical learning.
References


Does individual readiness to change is a must for commitment to change?

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Abstract

In order to be better and able to face external challenges, organization should be able to conduct many changes. Meanwhile, previous studies have shown that many organizational changes were not succeeded. Studies also showed that one important variable in organizational change and development is people, in terms of whether they are ready and committed to change. Previous study also showed that individual readiness for change is important in organizational change, however the studies only use one variable, and in this study the researcher uses many variables in order to identify the role of individual readiness. The objective of this study is to identify the role of individual readiness for change on commitment to change as mediator. This study was conducted at two State Owned Enterprises, consisted of 539 respondents. Data collection was using 5 (five) questionnaires: job satisfaction; organizational trust; psychological empowerment, individual readiness for change and commitment to change. SEM (Statistical Equation Method) was used to analyze the data. Results of the study show that individual readiness for change is significantly related with commitment to change, and act as mediator between job satisfaction, psychological empowerment, organizational trust with commitment to change. Individual readiness for change is a must in order to achieve commitment to change. Moreover, results also show that only job satisfaction and individual readiness for change that have direct impact on commitment to change. The implication of the study can be used for organization and change leader to focus their attention on job satisfaction and individual readiness for change in order to achieve organizational change successfully.

Keywords: Commitment to change, Individual readiness for change, Job satisfaction, Organizational trust, Psychological empowerment.

Introduction

In order to be always exist and compete, every organization should respond according to the demand of the environment. As a result, whether large or small; state-owned, private, governmental, or non governmental; no organization is immune to change, which consequently has to conduct organizational change programs (Jensen, 2003; McLagan, 2002). However, previous studies (Aiiken and Keller, 2009) showed that many change programs were failed, and they even stated that 2 out of 3 organizational transformations eventually lead to failures. There are many factors that might influence the success of organizational change such as content, context, process, people (Walker et al., 2007) and leader or leadership (Herold et al., 2008). People as one of important factor for the success of organizational change, should be supporting actively the change program, by showing their commitment to change (Herold et al., 2008). It is not organizations as entities that change, it is the people who are part of the organizations who change (Bovey & Hede, 2001; Lizar & Mangundjaya, 2015; Mangundjaya, 2015).

There are many stages of reaction change, from denial, it can achieve internationalization of the new status, namely: shock, denial, anger, bargaining, depression and finally acceptance (Kubler-Ross, 2014). There are some stages that people usually reacted towards the organizational change before they reached to the stage of internalization or commitment to change. Individual readiness for change, was mentioned as one of the important factor that may develop commitment to change (Mangundjaya, 2013). Commitment to change is necessarily for the success of organizational change, as through commitment to change, it can expedite the change process (Parish et al., 2008). Previous studies also showed that there are many factors that have an impact on commitment to change both from internal factors of individual, such as: psychological empowerment (Mangundjaya, 2015); psychological capital (Lizar et al., 2015), employee engament (Mangundjaya, 2013), organizational commitment (Mangundjaya, 2013), job satisfaction (Wulandari et al., 2015) as well as from external factors such as: organizational trust (Kalyal & Saha, 2008; Mangundjaya, 2014), leadership (Herold et al., 2008), and change communication (Mangundjaya, 2014).
Meanwhile, Holt et al. (2007) mention that individual readiness for change is the comprehensive attitude that simultaneously was influenced by 4 conditions namely: content or what is going to changed or has been changed, process, or how is going to change, context or in what situation that change is done, and characteristic of individual who involved in the change. Much of the subsequent literature supported that readiness of individuals to undertake organizational change appeared to be an antecedent of successful change (Armenakis & Harris, 2002; Cunningham et al., 2002; Holt et al., 2007; Jansen, 2000; Madsen, 2003; Madsen et al., 2005; Madsen et al., 2006; Mangundjaya, 2013; Palmer, 2009; Rafferty & Simons, 2006; Smith, 2005). Hence the objective of this study is to examine whether individual readiness for change is the most important variable in order to achieve commitment to change.

Literature Review

Commitment to Change

Stages of reaction to change usually started with anger, denial, acceptance and at the final stage, the change process is completed and the change is institutionalized. Commitment to change can be regarded as reaching the stage of institutionalized. Commitment to change according to Herscovitch ad Meyer (2002) is a drive or mind-set that makes individuals carry out the actions that are necessary for the successful implementation of organizational change.

Readiness for Change

Readiness as a cognitive state occurs when organization members have positive attitude, beliefs and intention towards the change (Armenakis et al., 1993). When the appropriate cognitive state is attained through the development of relevant attitudes, beliefs and intentions, individuals involve in the process begin to adopt the change and tend to behave in a way that is consistent with the change initiative.

Previous researchers (Armenakis & Harris, 2002; Bernerth, 2004) stated that individual readiness for change consists of beliefs and attitudes towards an initiative; a state of unfreezing; and a collection of thoughts toward a change initiative. Meanwhile, Hanpachern (1997) developed the instrument to measure individual readiness for change based on three dimensions namely; (1) resisting; (2) participating; and (3) promoting. Resisting, is the negative attitude of the individual toward change. Participating, is the individual participation in the change process. Promoting, is about how far a person would like to implement the change process. This study used the concept from Hanpachern (1997).

Psychological Empowerment

Psychological empowerment refers to a set of psychological state that are necessary for individuals to feel a sense of control in relation to their work (Spreitzer, 1995). Furthermore, Spreitzer (2007) stated that psychological empowerment consists of four dimensions as follows: (1) meaning, which define as congruence between the needs of one’s work role and one’s belief, values and behaviors (Hackman & Oldham in Spreitzer, 2007); (2) competence, which refers to self-efficacy specific to one’s work, or belief in one’s capability to perform work activities with skill (Gist, 1987; Bandura, 1989 in Spreitzer, 2007); (3) self-deteminate defines as a sense of choice in initiating an regulating one’s action (Deci, Connel & Ryan, 1989 in Spreitzer, 1995). It reflects a sense of autonomy or choice over the initiation and continuation of work behavior and processes (Bell and Staw, 1989 in Spreitzer, 2007); and (4) impact which reflects the degree to which one’s action can influence strategic, administrative, or operating outcomes at work (Ashforth, 1989 in Spreitzer, 2007).

Job Satisfaction

Job satisfaction is the degree to which people like (satisfaction) or dislike (dissatisfaction) their jobs (Spector, 1997). Jewell (2009) introduced the facet concept of job satisfaction. According to Jewell (2009), job satisfaction is employee satisfaction consists of many aspects in their works, which can be measured totally or partly. The facets of job satisfaction according to Spector (1997) are as follows: Pay, promotion, fringe benefit, supervision, and co-worker, operating conditions, nature of work, communication, and reward. In this current research, researchers will use the concept of job satisfaction by Spector (1997).

Organizational Trust
Trust is defined as the expectation that another individual or group will (a) make a good faith effort to behave in accordance with commitments both explicit or implicit, (b) be honest in whatever negotiations preceded those commitments, and (c) not take excessive advantage of others even when the opportunity exists, which then put into three dimensions a) Predictability (the keeping commitments dimension); b) Integrity (the negotiating honestly dimension; and c) Benevolence (the avoid taking excessive advantage dimension) (Cummings and Bromiley, 1996).

**Relationship between Individual Readiness for Change, Psychological Empowerment, Job Satisfaction, Organizational Trust on Commitment to Change**

The role of individuals in a change context cannot be doubt, as without the supports from people change program cannot be succeeded, as a result the role of individual should be explored in a different way. One of the important thing in a change process is individual commitment to change, and there are many variables that will affect the commitment to change, namely: individual readiness for change (Lizar et al., 2015), Psychological empowerment (Mangundjaya, 2015; Lizar et al., 2015), Organizational trust (Mangundjaya, 2015), job satisfaction, (Mangundjaya, 2015), psychological capital (Lizar et al., 2015), change communication (Kalyal & Saha, 2008; Mangundjaya, 2014).

As it was mentioned previously one of the stages of reaction to change, is called acceptance (or it is examining further it can be called as readiness for change) is followed by commitment to change, as a result it can be concluded that individual readiness for change has positive influence on commitment to change. This assumption has been supported with the studies by Mangundjaya (2013) and Lizar et al., (2015) which showed that individual readiness for change has a positive impact on commitment to change. Based on these discussions, it can be postulated that:

**H1:** Individual Readiness has positive impact on commitment to change

Meanwhile, employee readiness predictors might also influence the effective and successful implementation of, change (Berneth, 2004; Holt, Armenakis, Harris, & Field, 2007; Madsen, Miller, & John, 2005). One of the antecedents of individual readiness for change and commitment to change is self-efficacy, as self-efficacy is an important factor for adaptive behavior and performance. Based on the concept of people will change or not due to the ability and willingness, self efficacy fall under the concept ability. By mastering self-efficacy and competence, employees will be unlikely to resist the change as they feel they have confidence, which as a result employee who did not possess high self-efficacy and self-confidence will react negatively toward organizational change, as they were afraid and anxious about the uncertain future condition of the organization and the impact or the change for them. In many research, self-efficacy is often studied as a predictor in individual readiness for change (Armenakis et al., 1993 in Haque, 2008, Cunningham et al., 2002; Rafferty & Simmons, 2006). It was also found that change related to self-efficacy, self-esteem, optimism, and a sense of control predicted openness to change. In this current research, individual readiness for change. A sense of self-efficacy, competence, determination and impact are some of the dimensions of psychological empowerment (Spreitzer, 1995, 2007). Previous studies also showed the significant influence between psychological empowerment on commitment to change (Mangundjaya, 2015) and psychological empowerment on individual readiness for change (Lizar et al., 2015) Based on these discussions, the current researcher developed the following hypotheses:

**H2:** Psychological Empowerment has positive impact on Commitment to change

**H3:** Psychological Empowerment has positive impact on Individual readiness for change.

**H4:** Psychological Empowerment has positive impact on Commitment to change through individual readiness for change as moderator.

Job satisfaction according to Spector (1997) is the degree to which people like or dislike their jobs, based on their needs and want. As a result, when people feeling satisfied, they will be quite happy to follow what the management asked them to do, including following and accepting the organizational change. Previous studies (Mangundjaya, 2010) showed that there was a positive and significant correlation between job satisfaction and organizational commitment and job satisfaction with organizational citizenship behavior, in which according to the findings of Mangundjaya (2013), organizational commitment and commitment to change, is highly correlated, and commitment to change can also be categorized as championing behavior, similar with organizational citizenship behavior (Herscovitch & Meyer, 2002). Moreover, Wulandari et al., (2015) also found that job satisfaction had
positive correlation with commitment to change. Based on these discussions, the following hypotheses have been developed:

H5: Job Satisfaction has positive impact on Commitment to change
H6: Job Satisfaction has positive impact on Individual readiness for change.
H7: Job satisfaction has positive impact on Commitment to change through individual readiness for change as moderator.

Organizational change cannot be achieved without trust, as trust is needed during the process of change, especially if the change is large and has a big impact on the employees (Pritchett, 1997). However, even trust is important during organizational studies, there are still limited studies (Kalyal & Saha, 2008; Mangundjaya, 2014) who showed the importance of trust during organizational change, by having a positive impact on commitment to change. Based on these discussion, the followings hypotheses have been developed:

H8: Organizational trust has positive impact on Commitment to change
H9: Organizational Trust has positive impact on Individual readiness for change.
H10: Organizational trust has positive impact on Commitment to change through individual readiness for change.

Methods & Measures

Respondents for this study were 539 employees of two financial state-owned organizations, which were chosen by convenience sampling from the required criteria. Respondents are employees who had undergone some organizational changes, such as organizational restructuring, differences in strategic planning, and changes on general system and procedures. Data was collected through 5 types of questionnaires, namely: 1) Commitment to Change Inventory, (Herscovitch & Meyer, 2002) consists of 18 items; 2) Individual Readiness for Change Inventory (Hanpachern, 1997); 3) Psychological Empowerment (Spreitzer,1995,2007); 4) Organizational Trust and 5) Job Satisfaction Inventory (Spector, 2002). All questionnaires have been translated into Bahasa Indonesia and modified the scales to 1-6 Likert Scales, which have been tested and validated its reliability and validity. All data were collected and administered on site during work time. Data were analyzed using SEM (LISREL) and descriptive analysis for profile of respondents.

Results

In order to get a picture of the respondents, table 1 show the details profile of respondents, of 539 respondents, from the two State-owned financial institutions, that have undergone some organizational changes.

Profile of Respondents

Table 1: Profile of respondents

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>%</th>
<th>Education</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>334</td>
<td>61.97</td>
<td>Sr. High School</td>
<td>7</td>
<td>1.30</td>
</tr>
<tr>
<td>Female</td>
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<td>38.03</td>
<td>Bachelor Degree</td>
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<td></td>
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<tr>
<td>Position</td>
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<td></td>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non Staff</td>
<td>78</td>
<td>14.47</td>
<td>&lt;25 years old</td>
<td>12</td>
<td>2.23</td>
</tr>
<tr>
<td>Staff</td>
<td>234</td>
<td>43.42</td>
<td>25 – 44 years old</td>
<td>422</td>
<td>78.29</td>
</tr>
<tr>
<td>Section Head</td>
<td>79</td>
<td>14.66</td>
<td>&gt;45 – 56 years old</td>
<td>105</td>
<td>19.48</td>
</tr>
<tr>
<td>Division Head</td>
<td>44</td>
<td>8.16</td>
<td>Tenure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management</td>
<td>4</td>
<td>0.74</td>
<td>2-10 years</td>
<td>259</td>
<td>48.05</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt;10 years</td>
<td>280</td>
<td>51.95</td>
</tr>
</tbody>
</table>
From Table 1, it shows that the profile of the respondents are as follows: male (61.97%), range of age between 25–44 years old (78.29%), bachelor’s degree (74.77%), staff (43.42%), length of works more than 10 years (51.95%).

Table 2: Table of SEM Analysis

<table>
<thead>
<tr>
<th>No</th>
<th>Path</th>
<th>Coefficient</th>
<th>t-value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Individual Readiness For Change on Commitment to Change</td>
<td>0.57</td>
<td>12.93*</td>
<td>Significant</td>
</tr>
<tr>
<td>2.</td>
<td>Psychological Empowerment on Commitment to Change</td>
<td>-0.01</td>
<td>-0.37</td>
<td>Not Significant</td>
</tr>
<tr>
<td>3.</td>
<td>Psychological Empowerment on Individual Readiness for Change</td>
<td>0.39</td>
<td>11.12*</td>
<td>Significant</td>
</tr>
<tr>
<td>4.</td>
<td>Psychological Empowerment on Commitment to Change through Individual readiness for Change</td>
<td>0.22*</td>
<td>-</td>
<td>Significant</td>
</tr>
<tr>
<td>5.</td>
<td>Job satisfaction on Commitment to Change</td>
<td>0.15</td>
<td>3.27*</td>
<td>Significant</td>
</tr>
<tr>
<td>6.</td>
<td>Job Satisfaction on Individual Readiness for Change</td>
<td>0.28</td>
<td>6.29*</td>
<td>Significant</td>
</tr>
<tr>
<td>7.</td>
<td>Job Satisfaction on Commitment to Change through Individual Readiness for Change</td>
<td>0.16</td>
<td>-</td>
<td>Significant</td>
</tr>
<tr>
<td>8.</td>
<td>Organizational Trust on Commitment to Change</td>
<td>-0.00</td>
<td>-0.00</td>
<td>Not Significant</td>
</tr>
<tr>
<td>9.</td>
<td>Organizational Trust on Individual Readiness for Change</td>
<td>0.17*</td>
<td>3.82</td>
<td>Significant</td>
</tr>
<tr>
<td>10.</td>
<td>Organizational Trust on Commitment to Change through Individual Readiness for Change</td>
<td>0.97*</td>
<td>-</td>
<td>Significant</td>
</tr>
</tbody>
</table>

*P-value 0.0669>0.05; RMSEA 0.0307<0.08; GFI 0.987>0.90

Figure 1: The results of SEM Analysis

From Table 2, and Figure 1 above, it can be seen the following results:
1. Individual readiness for change, has positive impact on commitment to change, hypothesis 1 is supported,
2. Psychological empowerment has positive impact on individual readiness for change, hypothesis 2 is supported.
3. Psychological empowerment has positive impact on commitment to change, hypothesis 3 is supported.
4. Psychological Empowerment has positive impact on Commitment to change through individual readiness for change as moderator, hypothesis 4 is supported,
5. Job Satisfaction, has positive impact on commitment to change, hypothesis 5 is supported
6. Job Satisfaction has positive impact on Individual readiness for change, hypothesis 6 is supported.
7. Job satisfaction has positive impact on Commitment to change through individual readiness for change as moderator, hypothesis 7 is supported.

Discussion

From the results, it can be seen that there are only two variables that has a direct effect on commitment to change, which is job satisfaction and individual readiness for change. The study also showed that individual readiness has proven to be the mediator between job satisfaction to commitment to change; organizational trust to commitment to change, and between psychological empowerment on commitment to change. The other two variables, namely organizational trust and psychological empowerment has no significant correlation on commitment to change, however if the relationship through mediator of individual readiness for change, then there is a positive impact both between job satisfaction and psychological empowerment on commitment to change. Results also showed that the impact of individual readiness for change on commitment to change is the highest compared to the other two variables (Job satisfaction and psychological empowerment), in which only job satisfaction that has the positive impact on commitment to change.

Results showed that individual readiness for change has positive impact on commitment to change directly as well as act as mediator amongst job satisfaction, organizational trust and psychological empowerment on commitment to change. These results have supported the previous study done by Mangundjaya (2013a, Mangundjaya,2013b, Lizar et al., 2015), which showed that individual readiness for change has positive impact on commitment to change. These phenomena can be explained also by the extension of the theory of change curve of Kubler-Ross (2014), which explained that after a person accept/decide the changes the following stages is internalization or integration, which can be called as commitment to change. Logically, before a person commit to something, e.g. to organizational change, it should be started with a sense of readiness, and deciding to accept the changes and finally will be followed by internalization or integration.

The current study showed that psychological empowerment was not significant on commitment to change, if the relation is direct. However, if the relation is through individual readiness for change, then the impact is significant. This finding is not supported the previous findings which showed that psychological empowerment had positive commitment to change and even played as mediator between change leadership and affective commitment to change (Mangundjaya, 2016). The different results of this findings, can be due to the presence of variable individual readiness for change, if the two reaction to change variables are there, then the stages should be through individual readiness and not direct relationship. From this finding, it can be concluded that, individual readiness is an important variable in developing commitment to change.

Previous study also showed that organizational trust is important on people’s readiness for change, however the current results of the study has not supported the previous study done by Cartwright and Cooper (1993); Kalyal & Saha (2008) and Mangundjaya (2014), which showed that organizational trust has direct impact on commitment to change. In this study organizational trust has positive impact on commitment to change only through the mediator of individual readiness for change. In other words, without people readiness for change, then the next stage of commitment to change will not be achieved.

In relation with Job satisfaction the current study showed that job satisfaction does have an important role and impact on individual readiness for change and commitment to change. Although the score of impact as not as high individual readiness for change, but job satisfaction is the other variable besides individual readiness for change that has a direct impact on commitment to change. This path is quite interesting, as it showed that when people satisfied with their jobs and their organization, this will lead the employees to support and obey on
whatever the management and leader ask them to do, as in return of what the organization has providing them with all kinds of things in order to satisfy the employees.

There are some limitations of this present study. Firstly, is a cross sectional study using questioner as tools of collation, in this regard it is bounced to common method biases (Podsakoff,2003). Secondly, this study was held at a state-owned organizational that conducted organizational changes in terms of organizational structures, strategy and operating procedures, however it is not large scale and radical types of organizational change, in this regard, generalization cannot be done, and further study should be conducted in various types of organizations, as well as various types of organizational changes.

**Conclusion**

The results of the current study showed the critical and important role of individual readiness for change on commitment to change. Individual readiness for change showed as having the direct contact to commitment to change as well as act as a mediator between organizational trust, psychological empowerment and job satisfaction on commitment to change. This finding also supported and affirmed the stages of change curve that should be followed.

Furthermore, other variable that play an important role on commitment to change is job satisfaction, these findings also confirmed the theory of well being, and perceived organizational support, as it showed that when people feel satisfied on their jobs, organization, and organizational environment hence they will be happy to support the organization, including to support the organizational change, by showing their commitment to change. Based on these findings, in order to be supported from the employees in relation with organizational change, management should pay attention to the well being of their employees as well as to develop and equipped their employees to be ready for organizational change. Delivering openness communication, developing positive climate, delivering training, coaching, counselling is some of the activities that can be conducted.

**Reference**


Mangundjaya, W.L.H (2010). Relationship between job satisfaction, LMX, organizational commitment, and organizational citizenship behaviors. Paper presented at International Conference of Asian Psychological Association (APSYA), 4-7 July 2010, Darwin, Australia


AN INTERLANGUAGE PRAGMATIC STUDY OF THE CHINESE LEARNERS OF THAI

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ABSTRACT

Interlanguage pragmatics is the study of nonnative speakers' use and acquisition of linguistic action patterns in a second language (L2) (Kasper & Blum-Kulka, 1993). For decades, the study of interlanguage pragmatics in Thailand is growing but most of them concerned English as a foreign language (EFL) of Thai learners. There are limited numbers of interlanguage pragmatic studies regarding Thai and non-western contexts. Since Chinese students choose to study in Thailand continuously (Department of International Trade Promotion, Ministry of Commerce, 2010) and they become the largest population among foreign students in Thailand’s higher education (China.com, 2014), therefore, it is worth investigating the speech act of requests of Chinese learners of Thai as to provide some insights into interlanguage pragmatic features through the linguistic use. The present study is a qualitative study and adopts the Discourse Completion Test (DCT) as a research tool. The findings reveal the three types of request strategies, namely: Not performing an act; Single strategy; and Mixed strategy, with the six sub-types of requests performed by those Chinese learners of Thai. Those strategies reveal the interlanguage characteristics of Chinese learners as there might be some influences from their mother-tongue which affected their request strategies to deviate from Thai native speakers. Anyway, this study proposes that even the Chinese learners have proficiency in Thai but they still have some flaws in performing speech act of requests in Thai. One best way to improve their performance is exposing to Thai language use by staying in Thailand. Finally, the results of this study are expected to expand the area of interlanguage pragmatic study in Thailand and to shape the better world of learning and teaching Thai as a second/foreign language.

Keywords: Chinese learners; Interlanguage; Requests; Second language; Thai language

1. INTRODUCTION

Human beings are social animal. They live their lives relating to others and they cannot do everything by themselves. People make requests when they ask for something or when they want to get someone to do something. The speech act of requests is therefore pervasive in daily interactions. According to Searle (1976), the illocution of the act (of requests) is an attempt to get the hearer to do something for the speaker. Brown & Levinson (1987) stated that the speech act of requests is one of the most face-threatening acts as it can threaten the hearer’s negative face. Since the speech act of requests is performed in daily life and performing it might threaten the face of speaker and hearers which might lead to the risk of communicative failure, thus
Since Austin (1975) proposed the speech act theory, it has become an important topic in pragmatic research. The speech act of requests has fascinated linguists working on cross-cultural and cross-linguistic study and it has been one of the most widely examined features in both the interlanguage and cross-cultural pragmatics fields (Han, 2013: 1098; Vilar-Beltrán & Martínez-Flor, 2008: 199). The speech act theory is adopted as a framework in interlanguage pragmatics as well. Kasper & Blum-Kulka (1993) concluded that interlanguage pragmatics is the study of nonnative speakers' use and acquisition of linguistic action patterns in a second language (L2). Leech (2014) stated that interlanguage pragmatics (ILP) is the study of how nonnative-speaking (NNS) learners of a language acquire pragmatic competence in their target language. The interlanguage pragmatics emphasizes the influence of learners’ mother tongue. Kasper & Blum-Kulka (ibid) pointed out that the influence from learners’ native language and culture on their interlanguage (IL) pragmatic knowledge and performance has been amply documented. Because of its potential risk to communicative success, the focus has been on negative transfer; that is, the influence of mother tongue (LI) pragmatic competence on IL pragmatic knowledge that differs from the L2 target. Positive transfer, that is, pragmatic behaviors or other knowledge displays consistent across LI, IL, and L2.

Pragmatics originates and has been developing in the west for a long time. Since the late 1980s, students of pragmatics have been seriously investigating Eastern languages, particularly Japanese and Chinese (Chen et al., 2013: 141). This leads to many studies on interlanguage/cross-cultural pragmatics of Japanese and Chinese in comparison with English. In Thailand, the early linguistic studies focused on language system and language structure such as phonology, morphology, lexicography, and syntax (Deepadung, 2001). The study of language use i.e. Pragmatics gets more attention from Thai researchers in later period. Interlanguage pragmatics is a branch of pragmatics that has been studying continuously since pragmatics is settled in Thailand. But most of them concerned comparing and contrasting the use of English as a foreign language (EFL) of Thai learners. There are limited numbers of interlanguage and cross-cultural pragmatic studies regarding Thai and non-western contexts. Some of them are conducted so far, for examples, Thai and Japanese (see Bunwittaya, 2007), Thai and Filipino (see Boonkongsaen, 2013), Thai and Indonesian (see Supriyadi, 2005), and Thai and Punjabi (see Sachathep, 2012). Therefore, as to fulfill this gap, the current study aims at investigating the speech act of requests of Chinese learners of Thai comparing and contrasting with the Thai native speakers.

Thai language is not only popular in this sub-region (Cambodia, Laos, Myanmar, and Vietnam), especially in Cambodia, Myanmar, and Vietnam (Wareenil, 2017) but it also attracts Chinese students as well. Many universities in China offer Thai major for undergraduate students such as Baise University, Yunnan University and Yunnan Minzu University. Moreover, Chinese students choose to study in Thailand continuously (Department of International Trade Promotion, Ministry of Commerce, 2010; Zhang, 2017). They are also the largest population among foreign students in Thailand’s higher education (China.com, 2014). When Chinese students study in Thailand, they learn Thai language in both direct and indirect ways. Thus, it is worth investigating the speech act of requests of Chinese learners of Thai as to provide some insights into interlanguage pragmatic features through the speech act of requests produced by
those Chinese learners of Thai. Therefore, the aim of this study is to primarily investigate the request strategies produced by Chinese learners of Thai which have never been explored before. The results of this study not only reveal the characteristics of requests produced by Chinese learners of Thai but also suggest the appropriate request strategies under Thai social contexts which will be useful for learning and teaching Thai as a second/foreign language in the way of implementing the real-world language use to curricula design and material development, especially for the Chinese learners of Thai which are growing in number continuously.

2. METHODS
2.1. Size of Dataset
The participants of this study are 31 Chinese university students. They are pursuing a bachelor degree in Thai language in a Chinese university. At the time of data collection, they third-year students participating in the one-academic year exchange program at the Research Institute for Languages and Cultures of Asia, Mahidol University, Thailand.

This study is qualitative analysis. The syntactic and lexical features of requests will be coded and categorized according to the CCSARP request frameworks (Blum-Kulka, House & Kasper, 1989). In order to answer the research question What are the request strategies of the Chinese learners of Thai?, the strategies expressed through linguistic forms collected by Discourse Completion Test (DCT) will be analyzed.

2.2. Discourse Completion Test (DCT)
The Discourse Completion Test or DCT is adopted as the data collection tool in this study. It is written in standard Thai. All of the Chinese participants who are able to read and write Thai fluently will fill out the questionnaire in provided space in Thai with all of their existing knowledge and come up with what they believe is appropriate for such Second language (L2) situations. Li (2009: 56) pointed out that open questionnaire format left the participant sufficient space to respond, thereby encouraging more data for the research. The DCT consists of nine scenarios. Each scenario consists of situational contexts as to make the questionnaires closer to natural conversation. All of these scenarios are designed by considering situations which are familiar to Thai native speakers in daily interactions. Brown & Levinson (1987), proposed the three social variables, namely: (1) the social distance (D) between the speaker and addressee; (2) the relative power (P) of the speaker and addressee; and (3) the raking of the imposition (R). They claimed that these social variables are universal and exist in every society. This study adopts those social variables into the questionnaire design in order to investigate them as it is expected that those social variables exist in Thai society as well. Each scenario and its social variable scales are illustrated as following.

Table 1 Scenarios with social variable scales
1. วันนี้เป็นวันสุดท้ายที่คุณต้องส่งการบ้านแต่คุณไปส่งเองไม่ได้เนื่องจากเพื่อนอีกคนหนึ่งยืมรถของคุณไปใช้คุณเห็นเพื่อนสนิทของคุณกำลังจะออกไปช่างนอกคันต้องการให้เพื่อนสนิทช่วยส่งการบ้านให้คุณคุณจะพูดว่าอย่างไร

2. วันนี้เป็นวันสุดท้ายที่คุณต้องคืนหนังสือที่ห้องสมุดแต่คุณคืนไม่ได้เนื่องจากเพื่อนอีกคนหนึ่งยืมหนังสือของคุณไปใช้คุณเห็นเพื่อนช่วยคนหนึ่งควรมีหนังสือที่กำหนดจะออกไปป่วยหายไปคุณต้องการให้เพื่อนช่วยให้คุณคืนหนังสือที่ห้องสมุดคุณจะพูดว่าอย่างไร

3. คุณและเพื่อนอีกหนึ่งคนขึ้นรถเพื่อไปทำธุระในเมืองเมื่อคุณขึ้นไปบนรถมีที่นั่งว่างอยู่ 1 ที่และอีก 1 ที่มีกระเป๋าของใครหนึ่งคนหนึ่งวางอยู่ คุณต้องการให้คุณคนนั้นให้รู้ว่ามีที่นั่งว่างคุณต้องการให้คุณคนนั้นยืมกระเป๋าจากรถคุณจะพูดว่าอย่างไร

4. คุณเพิ่งรู้ว่าต้องจ่ายค่าหอพักภายในวันนี้แต่คุณมีเงินไม่พอคุณเห็นเพื่อนสนิทของคุณมีเงินพอคุณต้องการให้เพื่อนคนนี้ช่วยให้คุณเงินคุณจะพูดว่าอย่างไร

5. คุณเพิ่งรู้ว่าต้องจ่ายค่าหอพักภายในวันนี้แต่คุณมีเงินไม่พอคุณเห็นเพื่อนสนิทของคุณมีเงินพอคุณต้องการให้เพื่อนคนนี้ช่วยให้คุณเงินคุณจะพูดว่าอย่างไร
The scenarios and social variables in the above table are described as follows. In scenario 1 the addressor does not have social distance with the addressee because they are close friend. Relative power is considered the same. No one has higher or lower power. Rank of imposition is low because the task that the addressor asks the addressee to do is just submitting homework for him/her.

In scenario 2 the addressor has little social distance with the addressee because they are classmate, not close friend. Relative power is considered the same. No one has higher or lower power. Rank of imposition is considered low because the task that the addressor asks the addressee to do is returning a book to library for him/her.

In scenario 3 the addressor has much social distance with the addressee because they are stranger to each other. Relative power is considered the same. No one has higher or lower power because both of them are passenger on a bus. Rank of imposition is considered low because the addressee just asks for a seat.

In scenario 4 the addressor has little social distance with the addressee because s/he took many classes with this professor. Relative power is much different as the professor has higher power than student in Thai society. Rank of imposition is considered low because the addressor just asked to postpone assignment deadline to be tomorrow.

In scenario 5 the addressor has little social distance with the addressee because they are classmate, not close friend. Relative power is the same. No one has higher or lower power. Rank of imposition is considered low because the addressor just borrows an umbrella from the addressee.

In scenario 6 the addressor has little social distance with the addressee because the addressor is a customer but the addressee is a waiter. Relative power is different as a waiter has lower power than customer in Thai society. Rank of imposition is considered low because the addressor just asks the addressee to bring his/her food.

In scenario 7 the addressor has little social distance with the addressee because they are classmate, not close friend. Relative power is considered the same. No one has higher or lower power. Rank of imposition is high because the addressor wants to borrow 10,000 baht from the addressee to pay his/her room rental.

In scenario 8 the addressor has little social distance with the addressee because they are classmate, not close friend. Relative power is considered the same. No one has higher or lower power. Rank of imposition is considered medium because the addressor wants to borrow a mobile phone from the addressee to call his/her mother in China urgently.
Lastly, in scenario 9 the addressor has little social distance with the addressee because they are classmate, not close friend. Relative power is the same. No one has higher or lower power. Rank of imposition is considered low because the addressor just wants to borrow a pen from the addressee.

In order to finish the questionnaire, the respondents will consume approximately 15-20 minutes which is considered not too much burden for the respondents.

3. RESULTS AND DISCUSSION
3.1. REQUEST STRATEGIES OF CHINESE LEARNERS OF THAI

From the 31 Chinese university respondents together with 9 scenario questionnaire, therefore totally 279 strategies are elicited. Those strategies are analyzed according to their utterance structures and categorized following Blum-Kulka & Olshtain’s (1984) frameworks. The findings suggest that there are three main types of request strategies elicited from the Chinese learners of Thai, namely: Not performing an act; Single strategies; and Mixed strategies. Each type consists of sub-strategies except Type 1 as following.

**Type 1: Not performing an act**

This strategy was found only in one utterance. It is the rare-used strategies because it is considered impolite to not performing a request before getting thing from other person. In scenario 9 which the addressor has little social distance with the addressee because they are classmate, the relative power is considered the same, the rank of imposition is considered low because the addressor just wants to borrow a pen from the addressee, therefore the addressor decided to take a pen from his classmate without asking for permission.

**Type 2: Single strategy**

This strategies was found in 257 utterances. It is considered the most used strategy in this study. Single strategy is divided into sub-strategies as following.

2.1) **Direct request strategies**

The direct request strategies were found in 27 utterances. To perform the direct requests, an addressor will state his/her desire explicitly, for example:

chûay sòń̖ŋ kaanbân hâi nôy nà ‘Help me send homework’

help send homework for little FP.

The example above shows that the addressor begins the utterance with the word ‘chûay’ (help) followed by the word ‘sòń̖ŋ’ (send) in order to request her close friend to go to the university to send homework for her.

2.2) **Indirect request strategies**

The Indirect request strategies were found in 230 utterances. It is categorized into 2 sub-types, namely: Conventionally Indirect Strategies and Unconventionally Indirect Strategies.

2.2.1 **Conventionally indirect strategies**

The conventionally indirect request strategies were found in 224 utterances. To perform the conventionally indirect requests, and addressor tries to be indirect by using the conventional linguistic structure i.e. Yes/No question structure, for example:

khôô yuûm rôm khun nôy dâay mái ‘Can I borrow your umbrella?
request borrow umbrella you little can Yes/No Q.

The example above shows that the addressor uses Yes/No question structure ‘dâay mái’ as the
conventionally indirect request device in order to open a chance for the addressee to accept or deny the request.

2.2.2. Unconventionally indirect strategies

The unconventionally indirect request strategies were found in 6 utterances. To perform the unconventionally indirect requests, and addressor may use ‘Mild hint’ or ‘Strong hint’ as request strategies. In addition, it is found that the addressor may use only ‘Supportive move’ in order to be unconventionally indirect request, for example:

older person  Why food yet not come I send use time long very already
tɔnnii hiw mâak
now hungry very
‘Brother/sister, why has the food not yet come? I sent (an order) long time already. I am very hungry now.’

The example above shows that in requesting for the ordered food, the addressor uses ‘Strong hint’ in the utterance ‘thammai ?aahåan yan mâi dâay maa chân sôn châi weelaa naan mâak lâëw’ (why has the food not yet come?) in order to request the waiter/waitress to take the food for her. Moreover, the addressor uses two ‘Supportive moves’ which are ‘chân sôn châi weelaa naan mâak lâëw’ (I sent (an order) long time already,) and ‘tɔnnii hiw mâak’ (I am very hungry now.). In addition, the addressor uses the address term ‘phî’ which means older person as to be polite in Thai culture. All of these strategies were used to strengthen the illocutionary power of the request.

Type 3: Mixed strategy

The Indirect request strategies were found in 21 utterances. It is categorized into 3 sub-types according to the co-occurrences, namely: Direct Strategies + Conventionally Indirect Strategies; Direct Strategies + Unconventionally Indirect Strategies; and Conventionally Indirect Strategies + Unconventionally Indirect Strategies.

3.1) Direct strategies + Conventionally indirect strategies

The direct strategies occur with the conventionally indirect strategies in 20 utterances. Some addressor use mixed strategies in order to accomplish their requests, for example:

older person  FP. request pick bag out can Yes/No Q.
phî khrâp khôo yip krapâu ?ɔɔk dâay mâi phôm yâak nân nîi khrâp
I want sit here FP.
‘Brother/sister, Can you pick your bag? I want to sit here.’

The example above shows that in order to get his request fulfilled, the addressor uses both direct and conventionally indirect strategies. The addressor starts his utterances with the address term ‘phî’ which means older person as to be polite in Thai culture followed by the polite final particle ‘khrâp’ used by male speaker. In the next utterance ‘khôo yip krapâu ?ɔɔk dâay mâi’ (Can you pick your bag?), the addressor uses conventionally indirect strategy in order to request the addressee to move his/her bag from the bus seat. In addition, to strengthen the request, the addressor uses direct strategy with ‘Want statement’ in the last utterance ‘phôm yâak nân nîi khrâp’ (I want to sit here.). In Thai ‘yâak’ means want. It shows direct and strong desire and will in doing something.

3.2) Conventionally indirect strategies + Unconventionally indirect strategies

The conventionally indirect strategies occur with the unconventionally indirect strategies in
only 1 utterance in this study. In this case, such a co-occurrence is a seldom use as in the following example.

sawâtdii khâ nài ròt mài mîi thînàn lêñwày karunaa khun yip krapâu ?òòk dàyy mài
Hello FP. in car no have seat already please you pick bag out Yes/No Q.
khâ khòçëpkhun khâ
FP. thank you FP.
‘Hello. There is no available seat in the bus. Can you please pick your bag? Thank you.’
The example above shows that in order to get her request fulfilled, the addressor uses both conventionally indirect strategies together with unconventionally indirect strategies. The addressor starts her utterances with the ‘Alerter’ by saying ‘sawâtdii’ (Hello) and followed by ‘khâ’, the polite final particle for female. After that the addressor uses ‘Strong hint’ mentioning there is no available seat in the bus by saying ‘nài rôt mài mîi thînàn lêñwày’. Next, the addressor heads to her request by using the conventionally indirect strategy ‘karunaa khun yip krapâu ?òòk dàyy mài khâ’ (Can you please pick your bag?). Finally, to strengthen her request, the addressor uses a ‘Supportive move’ by saying thank you.

3.2 DISCUSSION
From the 279 strategies elicited in this study, they are categorized into 3 types of request strategies, namely: Not performing an act; Single strategy; and Mixed strategy. Furthermore, they are divided into six sub-types. All of them are illustrated with the frequency of strategy occurrence as following.

![Frequency of strategy occurrence](image)

Figure 1 shows the frequency of each strategy. The most occurred strategy is the conventionally indirect strategies which occurred 224 times or 80.28%. The second is the direct request strategies which occurred 27 times or 9.67%. The third is the direct strategies + conventionally indirect strategies which occurred 20 times or 7.16%. The fourth is the unconventionally indirect strategies which occurred 6 times or 2.15%. Lastly, not performing an act and conventionally indirect strategies + unconventionally indirect occur only one time or 0.35%.

As mentioned before, the findings of the present study reveal that the most used strategy is the conventionally indirect strategies with the occurrence rate at 80.28%. It contrasts to Lee-Wong and Han’s studies. Lee-Wong (1994, sited in Dong, 2008: 977) found that imperative, direct
strategies are the dominant ways of making requests in Chinese culture. There are also similar results in Han’s (2013) study. It was found that native Chinese speakers prefer to use direct strategies i.e. imperatives. She argued that imposing on someone’s freedom of action does not usually threaten the addressee’s face in Chinese. What really concerns the addressee’s face in the Chinese society is his/her dignity or self-respect. She argued that negative face does not exist in Chinese culture. But using imperative i.e. direct strategies in Thai is considered threatening addressee’s face i.e. negative face and might be perceived as impolite act, especially when requesting people with higher status, Thai speakers will use the structure with ‘Supportive moves’ only in order to be very polite (Wiroonhachaipong, 2000). The main reason why the Chinese learners of Thai prefer the conventionally indirect strategies in requests might be the influence of the lessons. They learned the structures of requests in Thai in their classroom. The other influence might come from contacting with Thai people such as their Thai teacher(s), Thai seller(s) and Thai friend(s) in China before exposing themselves to Thai cultures as the exchange students in Thailand.

Anyway, although the Chinese learners of Thai have high language proficiency and they know the appropriate strategies in requests in Thai, they still have pragma-linguistic and socio-pragmatic flaws in requests, for examples:

1) khɔ̌ɔ thɔ̌ ot nā khā chān kāp phian sāŋ ?aahāan maa naan lēëw excurse me FP. FP. I with friend order food come long time already tīe yāŋ mái mii khrāi sōŋ ?aahāan maa ciŋ yāak khɔ̌ khun chūay but yet not have who send food come thus want request you help tītaam ?aahāan maa hái dāay māi follow food come give can Yes/No Q. ‘Excuse me, my friend(s) and I made an order for a long time but it has not come yet. Can you check it for us?’

2) ?aacaan khrāp wānnī kaanbāan khɔ̌ phōm yāŋ mái ?au maa khɔ̌ Teacher FP. today homework belong I yet not take come request phrûnnī dāay māi tomorrow can Yes/No Q. ‘Teacher, I do not bring my homework today. Can I send it tomorrow?’

3) Not performing a request. Just take a pen from his classmate.

By making a request to a waiter to follow her order, the addressor in example 1) uses both direct strategies and indirect strategies in a request. The addressor uses ‘Want statement’ yāak (want) which is the direct strategies together with the indirect strategies i.e. conventional indirect request. The addressor uses ‘Query preparatory’ khɔ̌ (ask) together with chūay (help) and yes-no question dāay māi. The structure and strategies used in 1) deviates from Thai native speakers and it seems too polite in communicating with a waiter who has lower social status than customer in Thai society. According to Blum-Kulka & Olshtain’s (1986), this characteristic is considered “too many words” of the learners of second/foreign language. On the contrary, the addressor in 2) and 3) might be impolite as their request strategies do not appropriately match with the social variables i.e. social status and social distance. In example 2) the addressor makes a request by using the conventional indirect strategies with query preparatory to the teacher who has higher social status. In this case, the addressor might use more supportive moves to mark politeness (Wiroonhachaipong, 2000) together with final particle ‘khrāp’ since the final particles in Thai show politeness and respect (Deepadung, 2009). Lastly, the addressor in example 3) chooses not to perform a request and take a pen from his classmate without asking for permission. This accords with Chen & Chen’s (2007) study. They found that Taiwanese EFL learners chose not to perform a request in some situations. This
might due to the in-group characteristic of Chinese but it can be interpreted as impolite in Thai culture which one is expected not to take people’s thing without asking for permission. Those examples show only some problems that non-native speakers encountered when they communicate in second/foreign language. Although those Chinese learners of Thai can communicate in Thai fluently, the pragmatic meaning of utterances might not be appropriate in some social contexts. This kind of problems may cause difficulties, misunderstanding or lead to failure in second/foreign language communication since the face-threatening nature and the characteristics of requests determine that various politeness strategies are needed in order to successfully achieve the communicative end (Zhu, 2017).

4. CONCLUSION

Knowing how to make a request politely and appropriately to people of different social ranks is crucial in interpersonal communication (Lee, 2005: 398). Making requests, as a directive which involves the speaker’s effort to get the assistance of the hearer, is one of the most difficult speech acts for learners, especially second language (L2) learners (Lin, 2009: 1636). Even the high proficiency L2 learners usually make mistakes in their communication for their unawareness of pragmatic knowledge (Cai & Wang, 2013: 142).

Rose (2001) pointed out that students (L2) had more control over pragma-linguistic than socio-pragmatic aspects of speech act performance. Therefore, second/foreign language teaching should not only focus on vocabulary, grammar, and sentence structures but also pay attention to the real-world language use according to the socio-cultural specificity of that language. In the case of Thai language, the speakers and listeners’ social status seem to be the most influencing for Thai native speakers (Raksil, 2008), thus teacher of Thai language should adopt the pragmatic characteristics of second/foreign language learning in their teaching as to expose learners to the real use of the language. Blum-Kulka (1997, cited in Cai & Wang, 2013: 142) stated that L2 learners’ pragmatics mistakes are judged more unacceptable than their linguistic mistakes by their target language interlocutors. Therefore, another way to develop the learners’ pragmatic proficiency is to let them experience that language in its real context of use. Talking with native speakers and studying abroad such as the exchange program at Mahidol University are useful and able to improve the Thai language proficiency for those foreign learners as they can learn Thai language in the real socio-cultural settings. Moreover, they can get promptly corrections from the native speakers if they perform inappropriate utterances.

Anyway, since the present study focuses only on the request strategies of Chinese learners of Thai, other aspects are suggested as future research such as the linguistic structures and the pragma-linguistic and socio-pragmatic failures of the Chinese learners of Thai in performing the speech act of requests. Besides, the other speech acts such as apology, refusal, and invitation should be investigated in order to fulfill the interlanguage pragmatic research filed and to better benefit the teaching and learning Thai as a second/foreign language.

5. ACKNOWLEDGEMENT

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6. REFERENCES


Abstract

Indonesia’s poverty is characterized by a significant portion of women-headed households. Moreover, many studies on women participation in the economy also showed that gender discrimination to job and credit access persist. Foreseeing growing attention on micro-small enterprises (MSEs), the government launched Kredit Usaha Rakyat (KUR). Looking to the legal foundation of KUR, KUR is a gender-blind government-subsidized credit program designed for entrepreneurs who want to expand their current formal enterprises which have been established at least for six months.

Previous studies in other developing countries show that women excel better in credit market indicated by their lower rate of non-performing loan (NPL). Moreover, the previous findings also show that women-led enterprises give more impact on society; absorb more women labor, lower failing rate, and raise on family welfare. Considering that KUR’s design is gender-neutral, it may fall to inefficiency trap by imposing an equal rule for men and women.

This research aims to see whether government policy is efficient by not utilizing women advantages in the credit market. We use econometrics and qualitative surveys to assess gender behavior in the credit market. This paper uses Survei Industri Mikro-Kecil (VIMK) by BPS in 2014 to conduct econometrics analysis on gender behavior in the credit market.

The result shows that women have three characteristics which differ both males and females in the credit market and demonstrating that the policy is inefficient. First, women tend to borrow a small loan compared to men. Second, women are more risk averse than men in the credit market. Third, women experience less moral hazard than men in the credit market. Therefore, to achieve a better outcome of improving the welfare of this segment, the government may redesign the current KUR program to align with the previous findings.

Keywords: subsidized credit, demand side, women entrepreneur
I. Introduction and Literature Review

1.1 The Woman Entrepreneur

In most situations, women entrepreneurs are closely related to informal sector which many studies have described. The informal sector is suitable for the women entrepreneurs because of its flexibility on deciding the working hours, working pace, and the close distance between the job and the home (Bahramitash & Esfahani, 2011; Chen, 2001; Manning, 1998; Poncela & Steiger, 1996). If we also see closely to the studies of developing country, there are sheer numbers of women in informal sectors, particularly trade-based activities and workers in household enterprises. Moreover, most of women-owned business are small-scale, self-financed, low-technology, and labor-intensive operation. Some cases also showed that women entrepreneurs prefer the informal sector due to their responsibility to the family, low education level, and the type of enterprises chosen.

If we see deeper on women preference on the market, women entrepreneurs who chose a formal type enterprise are relatively older, married, rural-based, and have just started a company (Babbitt, Brown, & Mazaheri, 2015). One of the explanation on this phenomenon is the big push or ambition of the entrepreneur to enter the market exceptionally by capitalizing significant amount of costumer. If the family has been settled, there is a tendency to make a long-lasting enterprise which can prosper the family in the long run. Moreover, the main consideration of rural-based and “baby” enterprise prefer being formalized is the outreach. Common market need more trust to buy or deal with a baby company or the one that is in rural area or a remote area. Therefore, the company prefer being a formal entity rather than being informal. Looking to the other evidence, education also has positive link to preference toward formalization although has no significant interaction with gender. This means that the education provision has been equal between genders.

Although there has been no consensus on defining what informal sector is, we find that there are similar attributes that experts use to describe informal sector. It can be understood as a mixed group of activities and employment relationships that lack of legal recognition, regulation, and protection (Lloyd-Evans, 2008, p. 1885). In practice, informal sector is the sector which entity has no legal acknowledgement, its workers have no insurance protection and not being imposed by taxation, and relatively has lower productivity compared to the formal sector.

There are some factors encourage entrepreneurs in general to keep being informal (De Soto, 2002; Djankov, La Porta, Lopez de Silanes, & Shleifer, 2002; Klapper, Amit, Guillen, & Quesada, 2007; Strauss, 2005). First, there are excessive cost to enter formal market. Second, informal sector provides greater independence and flexibility. Third, if the principal wages or profit in informal sector is relatively higher, then they tend to choose informal sector. Fourth, it has an advantage to evade taxes and regulations. Fifth, low level of education or low level of access to information about credit can encourage entrepreneurs keep being informal.

On the contrary, there are also disadvantages of informal sector. First, it cannot benefit from property protection from regulations (Strauss, 2005). Second, informal enterprises may fail to access public goods which can level up their productivity (Babbitt et al., 2015). Third, formal
firms have a better market access compared to the informal one (Djankov et al., 2002). Although the disadvantages of being informal seems significant to the enterprise, it is not so significant if we see it from an MSEs perspectives. Being unable to benefit from property protection is relatively not important if there is no significant amount of assets which need to be protected. Moreover, in developing countries, informal enterprises do not worry on not having access to public goods since there is not so many variety and amount of public goods that is accessible. Finally, what is the benefit of being formal when most of the companies keep being informal? This question can be answered by understanding the market failure under fallacy of composition. More firm keep being informal mean more access to informal firms due to the relative size of informal firms relative to the total firm size. Thus, in this case, being informal is more appealing to the entrepreneurs.

Focusing on women enterprises, there are some barriers which inhibit them to enter formal sectors. First, some research shows that women are less competitive on accessing credit or loan (Klapper et al., 2007). Second, other research also shows that institution is not the cause of informalization but more because lack of access to finance (Estrin & Mickiewicz, 2009). Third, household responsibilities can inhibit women to grow their business, so they have less incentive to formalize the company. Fourth, relatively lower women education also has effect on the preference to stay in informal sectors (Van der Sluis, Van Praag, & Vijverberg, 2005). One of the studies which explain the needs of formalization suggests that government should consider the gender-based differences in the preferences of entrepreneurs (Babbitt et al., 2015). Continuing from this foundation, government can also see the other differences which emerge by juxtaposing gender side by side. It is also difficult to unpack the difference between women entrepreneurs who emerged along multiple layered identities. From a policy-making perspective, such specification is needed because not all entrepreneurs will respond positively to rules and regulation, such as formalization.

1.2 Woman, Credit, and Bank

1.2.1 Woman and credit

Financial inclusion is a significant factor to improve economic growth. For the poor people particularly, financial inclusion provides opportunity for the poor people to build savings, invest, and access financing (Ellis, Lemma, & Rud, 2010). Moreover, it also enables poor people to handle income shocks and coping with unforeseen emergencies such as being unemployed and illness (Beck, Behr, & Madestam, 2015). Although health insurance is much strongly recommended than credit, credit to cope with economic shock is the only hope for many people with difficulties to access health insurance.

In the literatures, we find that the studies between women are typically cross-country researches (Babbitt et al., 2015). Even within the country studies do not explain the behavior of women enough. Despite they do, it mostly focused on access alone. This is one of the reason why this research tries to see not the access, but the behavior themselves. This paper defines access as the channel or way for the people to attain enough credit. Even though the discussion of access is still being debated as will be explained later, there is a gap between gender in credit market. The absolute difference may not be reliable to see the gap due to the historical discrimination towards women. However, we still can find the gap when we use the relative measurement. This shows that the gap between gender does exists. Looking from the previous research, the
gap between gender in credit market is explained by lower financial literacy between women (Babbitt et al., 2015).

Theoretically, there are three inexhaustible ways which link the impact of gender on finance or credit (Ghosh & Vinod, 2017). First, gender equality increases the stock of human capital. Second, gender equality channels give impact on capacity enhancement. Third, gender equality can improve agricultural output. From these three aspects, we can see from comprehensive way that the gender equality does not only improve the prosperity of the entrepreneurs, but also improving the welfare of the other agents which are strongly related to the enterprises.

Related to point that was made in the previous paragraph, the lack of access to finance can encourage gender inequality and lead to poverty traps (Galor & Zeira, 1993). As the drawback effects of lack of access can produce the contradicting result which means it does not only affect the entrepreneurs negatively, but also the agents which are strongly related to the enterprises. These means that encouraging gender equality is a necessity to lower the potential of being caught in poverty trap.

1.2.2 What does bank do?
Bank is the main financial institution which connecting the people who have money and those people who need financing. Bank mainly works as an intermediary between two and more agent groups. Since the bank is also a business entity, then it also gain particular amount of money for their operational and profit taking. Looking more to the bank practices, bank is vital on its two main functions: monitoring and financing.

First, bank delegated as monitors which place as intermediary between lender and borrower (Diamond, 1984). By positioning itself between them, bank has role to channel both information and money between two parties. The lenders will want to know their deposit or investment status while borrower also want to know how much is the cost of bank financing and what are the risks that is possible related to the bank financing. To fulfill its task as an intermediary entity, bank collect information which can minimize the asymmetric information (Diamond, 1984). By doing this, bank has more information on the behavior of the agents. Using the information attained, bank can calculate how much risks that each borrower has and how much risks that the lenders accept.

If we consider the financial institution architecture, SMEs are heavily dependent on banking as formal channel to access credit since equity market is inaccessible (Caglayan & Xu, 2016).

1.3 Double Discrimination

1.3.1 SME Factor
The first factor that discriminate SMEs are their nature which do not have much access to the formal financial market, except bank and some other micro finance firms (Caglayan & Xu, 2016).

The second factor is that SMEs themselves face harder time to obtain credit than large firms (Beck, Klapper, & Mendoza, 2010). The main factor is lack of ability to produce high quality collateral and transparent report which can affect its creditworthiness (Pigini, Presbitero, & Zazzaro, 2016).
1.3.2 Gender Factor

There are two types of discrimination which involves women (Moro, Wisniewski, & Mantovani, 2017). They are prejudicial and statistical. Prejudicial forms of discrimination are taste-based and can be defined as lack of adherence to objective criteria in making judgement on individuals (Becker, 1971). To explain more of the prejudicial discrimination, Orser (2006) stated that women are being labelled and put under stereotype at the family level and business. Therefore, there is an invisible barrier which limit women in the society as well as business sectors. Statistical discrimination occurs in situation characterized by imperfect information (Arrow, 1973). One of the case is when the data is not valid or adequate for banks to decide whether the individual should be given loan. The bank decides not to give loan for the sake of the credibility which they cannot make without enough data.

Although the issues related to discrimination are relatively complicated and multilayered, our discussion will be focused on the gender of the owner who manage the enterprise which may influence the credit availability. The empirical findings regarding these cases are mixed and still progressing (Moro et al., 2017). One evidence said that if the women are successful in running their business, no discrimination is in action (Cavaluzzo & Cavaluzzo, 1998). The other said that financial institutions are not biased against women, the evidence of discrimination exist in work and job market. One of the interesting finding is that women-loan-managers are more likely to deny credit to female entrepreneurs (Saparito, Elam, & Brush, 2013). Moreover, firms with women leadership are found to face different contract terms which gives them disadvantages (Fabowale, Orser, & Riding, 1995). This may be due to the fact that the characteristic attributed to successful entrepreneurs are more commonly attached to men (Buttner & Rosen, 1988).

Seeing the discrimination from the economic dichotomy, we can divide the act of discrimination happens in supply and demand of credit market.

There are three evidences of supply-side discrimination toward women in credit market. First, women faces higher rates of rejection when proposing a credit loan (Cavaluzzo & Cavaluzzo, 1998). Second, There is lower availability of credit for women in credit market (Bellucci, Borisov, & Zazzaro, 2010). Third, women faces worse price terms and conditions in credit market (Coleman, 2000).

Other evidences from the previous research shows that women are being non-economically discriminated to access finance (Mahastanti & Nugrahanti, 2013). Moreover, women also has stereotypes from the society regarded as a risk averse parties in business (Maxfield, Shapiro, Gupta, & Hass, 2010). One of the factor is that they faces barrier like a 'glass-ceiling' to access financing (Agier & Szafarz, 2013). Therefore, they tend to borrow less than the male counterparts. Sometimes, they are subject to a higher interest rate due to their credit worthiness measurement.

Despite discrimination upon women, numerous finding shows that women entrepreneurs tend to have some advantages. Credit provided to women tend to have a lower failure compared to men. Women also showed a better performance in managing microcredit (Suman, 2007).
Although the previous evidence showed that there is discriminative interaction of women in credit market, we found that there are mixed results which involve women in credit market.

Looking from demand side of credit market for women, we can also see that there are three evidence which explains discrimination. First, women are endogenously more risk averse than men (Croson & Gneezy, 2009). Second, women find having debt is not preferred (Carter, Mwaura, Ram, Trehan, & Jones, 2015). Third, women are more cautious to financial choice (Barber & Odean, 2001).

Another explanation also showed additional causes which have made women being discriminated from demand-side perspectives, structural difference between companies owned by genders and their avoidance to debt (Orser et al., 2006). This is caused by women entrepreneurs' less interest to expand their business, they prefer small size enterprises that can be run part-time (Orser et al., 2006).

Responding to evidences of discrimination on women in credit market, there are some measures that have been done (Blau & Kahn, 2001; Bush, 2011). Governments have progressively adopted regulations which limits potential inequality regarding gender. The example is an equal pay procedure, equal opportunity legislations, quotas to promote women’s political representation and gender-neutral status in application forms.

1.4 Case of Asia

Women find it more difficult to get financing from banks because of inadequate information and information asymmetry in a weak institutional environment (Wellalage & Locke, 2017). This case happens especially among less educated women. Women may also face unequal inheritance practices and laws, discriminatory laws on property ownerships, access to finance, and other discriminatory practices by banking institutions. One of the example is the patriarchic system of village leadership may be enforced blatantly, or through customary process, approaches that are supported neither by law nor regulations. Such forms of bias are harder to document and examine.

Focusing on the women enterprises, we can also see that most of the enterprises are small-scales, self-financed, low-technology, and labor-intensive operation (Klapper et al., 2007). It is often argued that female entrepreneurs prefer the informal sector due to family concern, low education level, and size of preferred enterprises (Babbitt et al., 2015).

II. Data and Methods

This research relies mainly on the Survey of Micro and Small Industries or Survei Industri Mikro dan Kecil (VIMK) conducted by Indonesia Statistics or Badan Pusat Statistik (BPS). This survey collects information about MSE in Indonesia from the owner’s demographic data to the profit of each enterprises.

The firms in the sample are randomly taken from the National Industrial Census. Although that the data was selected using stratified random sampling, the dataset is inadequate to analyze on provincial level.

We use two types of statistical method to assess whether there is any discrimination exist of women entrepreneurs to access bank credit. The first method is descriptive analysis which
explain the real data of microcredit and comparing the behavior of man and women entrepreneur on accessing bank credit in Indonesia.

III. Results and Discussion

Regression results show that female entrepreneurs will propose a lower amount of loan from the bank. Since most women entrepreneurs do have a small business, so it does not require a large additional capital. Beside that in general female entrepreneurs also risk averse and do not have much courage to apply for a large amount of loan, for fear of not being able to return it in accordance with the agreement.

Female entrepreneurs who own micro industry face double burden: being female and micro entrepreneurs. As a woman, they are considered not credible enough to borrow in large amount, whereas as micro entrepreneurs, they are considered do not need large loan funds. This double burden which causes loans to female entrepreneurs is generally small.

Table 1 OLS-Regression Table of Women Entrepreneurs in Bank Financing

<table>
<thead>
<tr>
<th></th>
<th>Model 1 b/se</th>
<th>Model 2 b/se</th>
<th>Model 3 b/se</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>-7.118***</td>
<td>-2.317***</td>
<td>-2.357***</td>
</tr>
<tr>
<td></td>
<td>-0.03</td>
<td>-0.02</td>
<td>-0.02</td>
</tr>
<tr>
<td>Total Workers</td>
<td>1.032***</td>
<td>1.007***</td>
<td>1.007***</td>
</tr>
<tr>
<td></td>
<td>-0.01</td>
<td>-0.01</td>
<td>-0.01</td>
</tr>
<tr>
<td>ln(Total Profit)</td>
<td>0.859***</td>
<td>0.702***</td>
<td>0.702***</td>
</tr>
<tr>
<td></td>
<td>-0.01</td>
<td>-0.01</td>
<td>-0.01</td>
</tr>
<tr>
<td>ln(Total Assets)</td>
<td>1.371***</td>
<td>1.264***</td>
<td>1.264***</td>
</tr>
<tr>
<td></td>
<td>-0.01</td>
<td>-0.01</td>
<td>-0.01</td>
</tr>
<tr>
<td>Other sources of finances (%)</td>
<td>-0.456***</td>
<td>-0.457***</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Small Industry Dummy</td>
<td>2.185***</td>
<td>1.979***</td>
<td>1.979***</td>
</tr>
<tr>
<td></td>
<td>-0.07</td>
<td>-0.07</td>
<td>-0.07</td>
</tr>
<tr>
<td>Age of the Entrepreneurs</td>
<td>0.033***</td>
<td>0.033***</td>
<td>0.033***</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Entrepreneurs’ Highest Education</td>
<td>1.167***</td>
<td>1.167***</td>
<td>1.167***</td>
</tr>
<tr>
<td>constant</td>
<td>10.452***</td>
<td>11.935***</td>
<td>11.577***</td>
</tr>
<tr>
<td></td>
<td>-0.02</td>
<td>-0.14</td>
<td>-0.15</td>
</tr>
<tr>
<td>R-sqr</td>
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<td>0.311</td>
<td>0.313</td>
</tr>
<tr>
<td>dfres</td>
<td>3668871</td>
<td>3644486</td>
<td>3644484</td>
</tr>
<tr>
<td>BIC</td>
<td>34203145.4</td>
<td>32680730.6</td>
<td>32667407.8</td>
</tr>
</tbody>
</table>

* p<0.10, ** p<0.05, *** p<0.01

Source: Authors

Size of the enterprises matters as well as owners education and experiences. Size attempt to determine whether a business can repay its loan. The larger the size of the business, the greater the probability of a business can return its loan. Regression results show that micro businesses will borrow less funds than small businesses. On the other hand, the education of women
entrepreneurs has a positive effect on borrowed funds. So the more educated they are, the higher the likelihood to get a bigger loan.

### Table 2 Logistic Regression Table of Women Entrepreneurs in Bank Financing

<table>
<thead>
<tr>
<th></th>
<th>Model 4 b/se</th>
<th>Model 5 b/se</th>
<th>Model 6 b/se</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>-1.226***</td>
<td>-0.618***</td>
<td>-0.645***</td>
</tr>
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<tr>
<td>Total Workers</td>
<td>0.082***</td>
<td>0.081***</td>
<td>0.081***</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>ln(Total Profit)</td>
<td>0.278***</td>
<td>0.259***</td>
<td>0.259***</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>ln(Total Assets)</td>
<td>0.342***</td>
<td>0.330***</td>
<td>0.330***</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other sources of finances (%)</td>
<td>-2.404***</td>
<td>-2.401***</td>
<td>-2.401***</td>
</tr>
<tr>
<td></td>
<td>-0.01</td>
<td>-0.01</td>
<td>-0.01</td>
</tr>
<tr>
<td>Small Industry Dummy</td>
<td>0.084***</td>
<td>0.061***</td>
<td>0.061***</td>
</tr>
<tr>
<td></td>
<td>-0.01</td>
<td>-0.01</td>
<td>-0.01</td>
</tr>
<tr>
<td>Age of the Entrepreneurs</td>
<td>-0.014***</td>
<td>-0.014***</td>
<td>-0.014***</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Entrepreneurs' Highest Education</td>
<td>0.125***</td>
<td>0.125***</td>
<td>0.125***</td>
</tr>
<tr>
<td>constant</td>
<td>-2.073***</td>
<td>-10.218***</td>
<td>-9.427***</td>
</tr>
<tr>
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<td>0</td>
<td>-0.03</td>
<td>-0.03</td>
</tr>
<tr>
<td>Pseudo R-sqr</td>
<td>0.0379</td>
<td>0.2163</td>
<td>0.223</td>
</tr>
<tr>
<td>dfrs</td>
<td>1964473.1</td>
<td>1586835.9</td>
<td>1573319.1</td>
</tr>
</tbody>
</table>

* p<0.10, ** p<0.05, *** p<0.01

Source: Authors

Interestingly enough, as the age of the owner increases, the probability they get the loan (regardless the amount) is lower. This means for women entrepreneurs her business experience does not become part of the consideration of banks to provide loans.

### Table 3 Logistic Regression Table of Women Entrepreneurs in Bank Financing

<table>
<thead>
<tr>
<th></th>
<th>Model 4 or/se</th>
<th>Model 5 or/se</th>
<th>Model 6 or/se</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>0.293***</td>
<td>0.539***</td>
<td>0.525***</td>
</tr>
<tr>
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<td>0</td>
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</tr>
<tr>
<td>Total Workers</td>
<td>1.085***</td>
<td>1.085***</td>
<td>1.085***</td>
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<tr>
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<td>0</td>
<td>0</td>
</tr>
<tr>
<td>ln(Total Profit)</td>
<td>1.321***</td>
<td>1.296***</td>
<td>1.296***</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>ln(Total Assets)</td>
<td>1.408***</td>
<td>1.391***</td>
<td>1.391***</td>
</tr>
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<tr>
<td>Other sources of finances (%)</td>
<td>0.090***</td>
<td>0.091***</td>
<td>0.091***</td>
</tr>
<tr>
<td></td>
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<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Small Industry Dummy</td>
<td>1.088***</td>
<td>1.063***</td>
<td>1.063***</td>
</tr>
<tr>
<td></td>
<td>-0.01</td>
<td>-0.01</td>
<td>-0.01</td>
</tr>
<tr>
<td>Age of the Entrepreneurs</td>
<td>0.986***</td>
<td>0.986***</td>
<td>0.986***</td>
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<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Entrepreneurs' Highest Education</td>
<td>1.133***</td>
<td>1.133***</td>
<td>1.133***</td>
</tr>
<tr>
<td>constant</td>
<td>0.126***</td>
<td>0.000***</td>
<td>0.000***</td>
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<td>0</td>
</tr>
<tr>
<td>Pseudo R-sqr</td>
<td>0.0379</td>
<td>0.2163</td>
<td>0.223</td>
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</tr>
</tbody>
</table>

* p<0.10, ** p<0.05, *** p<0.01
IV. Conclusion

The result support the previous findings which shows that there are discrimination against women in credit market. However, the discrimination exist not only in the access (supply) but also on the behavior of female entrepreneurs (demand). Since women prefer smaller enterprises, then the need of credit is lower. (demand-side feature).

From demand perspectives, it shows that women have tendencies to borrow less due to the size of enterprises that they owned and the preferences they possess.

To elevate the welfare of female-headed households who own enterprise, some intervention on the demand-side is needed.

However, more studies are needed to understand women behavior in credit market.
References


