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DISCOURSE ON HISTORICAL SOURCES, INTERPRETATION AND WRITING OF HISTORY IN NIGERIA TODAY

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Abstract: *The place of sources and interpretation in historical discipline is indeed a crucial and significant one. As important as the vine or tape roots are to the survival of any plant so also is sources and interpretation to historical scholarship. This paper focuses on sources of history and the role of interpretation and writing of history in Nigeria today. The paper analyzed the various sources of history and the role of interpretation and writing of history in Nigeria. For the sources of history and interpretation in the writing of history has a direct effect on the nature, type and quality of history obtained in Nigeria. The paper identified and discusses the various sources for the writing or reconstruction of Nigerian history. Furthermore, it also looks at the role of interpretation and historical writing in Nigeria by examining the critical role and responsibility on the historian in reconstructing or writing Nigerian history. It equally, examines the impact of sources and interpretation on the writing of history in Nigeria. The paper adopts the library method of research which is based on secondary sources to come out with its findings. In conclusion, the paper revealed that the sources for the writing and reconstruction of history in Nigeria are divided in to primary and secondary sources. While the primary sources comprised of oral, archaeological, linguistics, ethnographic, anthropology and geography, the secondary included written sources such as nsibidi, Arabic script, Roman script and record of British colonial administrators. Moreover, it also uncovered that the historian was the sole determinant of historical facts and interpretation in the writing of history in Nigeria and that this has impact on the development of historical scholarship in Nigeria.*

Keywords: *(Sources, Interpretation, Reconstruction, Historian, Nigerian)*

Introduction

It is important to state here that historical scholarship is not only unique but deeply characterized by lay down rudiments and procedures for a historian to apply as a professional. Some of these stages have been rightly captured by Carl Becker (1955), in his statement that:

“...the historian is concerned with events, acts, thoughts, emotions that have forever vanished as actual occurrences... He can deal with them because these vanished realities give place to pale reflections, and palpable images or ideas of themselves, and these pale reflections, and palpable images which cannot be touched or handled are all that is left of the actual occurrence. These

are therefore what the historian deals with. These are his materials”. He has to be satisfied with these, for the very good reason that he has nothing else”

The above statement identifies three key elements which are very indispensable to a historian. The first essential element or tool is the “facts” referred to as “his materials”. This means that facts are the materials of the historian. The second important element is the “interpretation” captured in the description “He can deal with them.” This could be rightly put as the historian can properly interpret his facts. Meanwhile, the third element is the task of “writing” expressed as “...the historian is concerned with events, acts, thoughts, emotions...”. This implies that the historian is interested in writing about events or occasions, acts or deeds, thoughts or reasonings and emotions or feelings etc. These are the three critical stages that produces a historical document or work. However, it is important to admit that the role of a historian is immensely overwhelming for all the elements or tools depend on him. In other words, the historian is the fulcrum to produce a historical document or work. In the light of the foregoing, this paper comprises of literature review inform of conceptual clarification, identifies the sources of history in Nigeria. Furthermore, it discusses the historian's interpretation of facts in writing history in Nigeria. Finally, it looks at the impact of interpretation in the writing of history in Nigeria and conclusion.

Literature Review

Conceptual Clarification

History as a discipline has been largely misconstrued by so many people despite the fact that all phenomenon has a history. Some of the reasons according to Joseph et al(2015), why it is so is because majority are naïve, fearful of the subject, uninterested in the discipline and often forget that one of the major purpose of history is to supply information which addresses in a unique manner the following fundamental questions: what, how, when, who and why? It is important to note that more often those involved in such phenomena or event hardly pay attention to address these significant questions during their involvement or life time. And even if they do it may not be exhaustive for each generation see phenomenon and events in different light from others. At the end the upcoming generations are faced with the task to get systematic answers which connect the past to the present and the future. However, where an individual or a generation/nation fails to get answers to the above questions such is doom for destruction due to the disconnect.

Nevertheless, the onus to fixed the disconnect solely lies with the historical discipline. This is where the required training and skills are acquired by the historiographers whose duty it is to fashion out the solution or remedy and clear away ignorance and doubt. This is why Varvar (2010), rightly observed that history as a body of knowledge undoubtedly has certain characteristics that put it apart from other forms of knowledge. He further argued that history has some form of logic, methods and perspective which is peculiar to it. How then does a historian go about solving the problem of disconnect as his major task?

The evolution in historical scholarship has transformed it from being a merely narrative to an analytical and scientific discipline. However, this approach has led to the introduction of methodology as a core course which do not only address methodological and historiographical issues, but has proven to be a sure tool for the training of historiographers on how to handle various issues and aspects in the historical discipline (Harbst 1968). The would be historiographers are taught how to identify the sources to use in a historical construction or reconstruction and also how to skilfully wielder challenges associated with them. They are also made to know the strength and weakness of each source. Further more, they are shown the

guiding roles in the selection of sources and ways to handle difficult and challenging task in the course of carrying out their work. Therefore, with the above being bore in mind a historiographer goes on to get his materials known as the facts and then carry out his historical construction or reconstruction being a specialist in his own craft and profession which undoubtedly has contributed immensely to human development and civilisation holistically.

Type of Sources for Writing of History in Nigeria

According to Hassan et al (2015), the sources available for the writing of history in Nigeria can be categorize in to three namely, primary, secondary and tertiary. However, it should be noted that the categorization is usually based on the closeness or remoteness of the information they bear to the subject of study. For example, an eyewitness's account of an event is a primary source, while an information received from an individual who did not witness the event in question himself but got to know about it through another who witnessed it is a secondary source. For the tertiary source, this has to do with the medium of information that is remotely connected to the subject being studied. Moreover, some of the primary sources used in the study of history in Nigeria and Africa include: - oral, archaeological, linguistics, ethnographical, anthropological, geographical and written sources.

Primary Type of Sources

Oral Sources

This type of source provides the historian with information stored in the human brain and transmitted by words of mouth or in spoken form. Hassan et al (2015), stated that this consist of present generation reports by people who either witnessed the events themselves or got their information from those who were eyewitnesses. Similarly, Joseph et al (2015), also remarked that oral sources are pieces of historical information transmitted by words of mouth from person to person in a formal or informal way. According to them this source is prevalent mostly in pre-literate societies and known as oral evidence. Contributing to the discourse Falola et al (1999), asserted that oral traditions is the account of the past of people passed on orally from one generation to another up to the present and that traditions of origin of Nigerian people are, thus, oral accounts about the beginnings of various ethnic groups usually given by each of them from generation to generation and from time immemorial. Furthermore, Stevens Jr. (1978), defines and identified the role played by various forms of oral traditions. The four broad forms comprised of myths, legends, songs and popular histories.

According to him myths is a derivation from Greek word mythos meaning the branch of knowledge which is indisputable and not subject to rational argument. This value is placed on it by culture for it deals with fundamental realities and explains the origin of things and why things happen in the way they do as well as establish the standard for human behavior in the society. Therefore, he concluded that myths are more reliable to the historian for the reconstruction of the past.

Meanwhile, legends also constituted another type of historical narrative and speaks of the times after the cultural founders might have departed their earthly lives leaving the actual running of the society in human control. This source derived it authentication through their association with personages, events, or places which might be supported by other traditions, the details of the events described are of questionable historical veracity. However, the role of this source is that it deals with real personages and places, but unlike myths lacks divine sanction and is open to public reference and rational questioning.

Songs are equally, another important form of oral traditions which are vital in the reconstruction of Nigerian history. They comprised of poetry, epic, chart fan of verses and so

on. They are useful records of the times for better understanding of historical events. Since the composers of songs are free to include statement of social criticism, they are helpful in reconstructing fragmentary pictures of social conditions of the time. He said that this type of source make history to be more lively and vital.

Popular histories are also known as oral traditions. They are partly derived from myths, legends, songs and current events. In other words, popularly histories are a combination from other forms of oral sources identified above. The role of popular histories in the reconstruction of Nigerian history is that they reflect changing values and perceptions in the social process and society.

However, it is important to note that oral traditions sources is more abundant and also basic for the reconstruction of Nigerian and African history in general. This has served as a vital source to exhume the history of Nigeria to a very large extend. It is also the reliance on oral traditions that debunk the Eurocentric view upheld by European scholars like Hugh T. Roper and Hegel that Africa had no history but only the history of European activities.

Archaeology Sources

This source consists of the relics of material culture created or used by man. Others include artifacts of all sort, including remain of buildings, evidence of archaic industrial processes, living places, bones of domesticated animals, datable deposits in which pottery, grindstones and human burials have been found (Falola, et al. 1999). Some of the objects form part of the natural environment such as impressions made on the rock surfaces, rockslides, rock shelters, cave paintings or sculptures on stones or rocks. However, it is important to note that the study and interpretation of this remains has revealed very useful information about the past of man in Nigeria, particularly the early human settlements, domestication of plants and animals, the beginning of agriculture, trading activities, relationship between different communities and social stratification in any given society. That is why Falola et al. (1999), further asserted that in the last fifty years, significant progress has been made in finding out about the Nigerian past through archaeological sources. He also added that archaeological discoveries were made throughout the entire country, particularly in places where excavations are carried out like in Kursakata, Daima and Shilma in Borno State, Birnin Kudu in Kano State, Kaura Namoda in Sokoto State, the Nok culture in Plateau and Kaduna States, Iwo Eleru, Ilesa and Ife in Oyo State, the Igbo Ukwu in Anambra State and the Ewaoma in River State. Meanwhile, the study of the objects found in these places has shade much light about Nigeria's past dating back to about three thousand years in some places. Therefore, looking at its significant role, archaeology remains a durablesource for the writing and reconstruction of history in Nigeria.

Linguistic Sources

Furthermore, linguistic materials essentially derived from the study of the meaning of words such as names of places and people, as well as those relating to chronology constituted a source of history (Falola et al. 1999). Since speech or language is part of what gives every human group its identity and shapes the past, this means that historical narratives and works are contents and forms of thought, which are usually produced through the medium of language or speech. Hassan et al. (2015), also remarked that linguistics goes beyond the tool of communication to include the medium for realizing the history of man and civilization. Supporting this view Atando, stated that language is taken as the determinant factor in considering ethnic group identity because it is the means of communication, lacking which corporate existence and separate identity of an ethnic group becomes impossible. Furthermore, Falola et.al. (1999), pointed out that the important type of historical information from linguistic

source should include information about common origins of people who today lead separate or distinct existence and of the time that has lapsed since the separation of once united peoples. Similarly, inferences about the location of homeland from which groups of peoples with common origins initially dispersed and of the directions of their migration. He added that from the perspective of Nigerian history, linguistic materials could be regarded as superior to both oral and written sources for it is the only source that can show how each of the indigenous groups had come to occupy their present homelands before the dawn of history, that is, before oral traditions and written records.

Ethnographic Sources

The ethnographic materials play a vital role as a source in the history of Nigeria. It embraced a wide range of data derived from the daily life, customs, beliefs, and various practices of communities (Falola et al 1999). Essentially, it focused on all the various kinds of institutions such as social, political, economic and cultural branches within the Nigerian communities that may be useful to the historian for the reconstruction of the past. Hassn et al (2015), identified some of the ethnographic materials found in research centres, libraries and archives in Nigeria that were compiled by colonial anthropologist and administrators. A good example is an account documented by C. K. Meek titled *A Sudanese Kingdom*.

Geographical Sources

This according to Falola et al. (1999), comprised of sources related to the environment such as topographical, geomorphological, climatological, palaeoclimatological data. It also includes all the materials relating to the physical environment of human activity. The wide range of materials here include:- from reconstruction of conditions of the last pluvial period and the desiccation of the Sahara, to the 19th Century description of the countries by European travelers, to the 20th Century geographical survey. This data provides useful historical information that can assist the historian to reconstruct the past immensely.

Secondary type of Sources ***Written Sources***

The written sources of history in Nigeria are derived from all official and legal documents, diaries, letters, newspapers, industrial and commercial records, inscriptions on stones, pottery, bones, metals, maps and diagrams (Falola et al. 1999). However, there are three types of written sources. We have the *nsibidi* which is a system of written communication that was used majorly among the Ibibio ethnic nationality. Similarly, written sources also existed among ethnic groups such as the Nupe, Edo and in the Aro area but has not been used by historians possibly for the perception that these traditional sources were restricted to single groups, the secret society within groups or produced on perishable objects like wood, bark, calabash and ivory. Unfortunately, these sources were destroyed by wars and the penetration of Islam and Christianity.

Another written source identified by Falola et al. (1999), is the Arabic sources. The advent of Islam in to the Nigeria area notably Borno and Hausaland resulted in the introduction of Arabic scripts or records dating back to the 10th Century. Scholars continued in the practiced up to the 19th Century, during the period of the Jihad of Usman dan Fodio. Leaders of the Jihad wrote extensively on their activities and this has been of tremendous help to historians. Similarly, large collection of historical sources written in Arabic are found Ahmadu Bello University, Zaria, Arewa House Kaduna, National Archives, Kaduna and the University of

Ibadan. Some are also found at the Jos Museum, Maiduguri Museum, Sokoto Museum, Kano and Katsina Museums.

The third category of written sources of history in Nigeria is the Roman script. The script was introduced into Nigeria through the coastal area in the 15th Century, when Europeans travelers, traders, missionaries and other agents that penetrated the interior or travelled across the Sahara Desert to the Nigeria area. Among these include Barth and Clapperton who wrote extensively about different aspects of Nigerian societies in pre-colonial period. This later became widespread with the establishment of the colonial rule in Nigeria. In a similar vein, records of British administration and other activities in Nigeria are found in the national archives in Enugu, Ibadan and Kaduna. Such records are also kept in the Public Record Office, London and in other European countries. However, it is important to note that due to the colonial experience, too much emphasis was placed on the importance of written sources, yet it has some limitations of being corrupted during preservation or be easily lost through destruction by fire.

Therefore, from the foregoing, it is very certain that the writing of history in Nigeria is based on the above sources discuss. It should also be noted that each of the sources has its limitations, but the sole task rest on the historian who must make use of this sources in the interpretation and writing of Nigerian history to handle it objectively and professionally.

The Role of Interpretation and Writing of History in Nigeria.

As already highlighted in the introduction above, the overwhelming task of interpretation and writing of history in Nigeria solely rest on the historians. In other words, the onus of creating historical facts, interpretation of facts and processing the facts in writing or documenting history lies with the Nigerian historians today. Therefore, we shall examine how historical facts are utilize by historian in the reconstruction of Nigerian history.

The first critical step a historian would take in the reconstruction of Nigerian history is to obtain his “facts” based on the subject or area being considered. This has informed the assertion made by Carr (1961), that:

...“Not all facts are historical facts. But the distinction between historical and unhistorical facts is not rigid or constant; and any fact may, so to speak, be promoted to the status of a historical fact once its relevance and significance are discerned.”

From the statement above, it is the duty of Nigerian historians to carefully examine every fact on a given subject or area based on relevance and significance before such fact is promoted to the status of a historical fact. Historical facts are simply information or evidence about events. In other words, this are affirmations that events occurred. This also means that historical facts are reflections or ideas about actual events which have taken place, and which can no longer be practically felt or observed. Therefore, there is an inseparable link between a historical fact and an event which is why Becker (1955), rightly stated that the actual occurrence and the historical fact, however, closely connected are two different things. Similarly, Akombo (2015), has also emphasize the importance of facts by asserting that “the facts of history do not exist for any historian till he creates them.” This is also amplified by Carr (1961), when he remarked that ...“ history is the re-enactment in the historian’s mind of the thought of whose history he is studying.”

Secondly, it is important also for a historian involved in the writing of history in Nigeria to locate where the facts are. The historical facts may either exist in the historian’s mind or in records or documents commonly referred to as sources of history (Akombo 2015). That is one

of the reasons for emphasis on sources by historians concerning any subject of study or area in historical scholarship generally. In other words, sources of history are the raw materials from where historians obtained the facts for any historical construction. Therefore, the more the sources, the better it is for the Nigerian historian to effectively discharge his task objectively. This is why Carr (1961), declared that the facts speak only when the historian calls on them: it is he who decides to which fact to give the floor, and in what order or context. It is very important, to note that it is only after the sources of history are found that the Nigerian historian can begin to call his facts to speak in his preferred order and context.

The third step for a historian to take in the construction or reconstruction of history in Nigeria is the interpretation and selection of facts. In other words, the historian's purpose determines the type of historical facts he projects, creates or eliminates. This has formed the basis for Carr (1961), submission that history is what the historian makes. In a similar vein, Becker (1955), vividly stated that:

“The purpose the historian has in mind will determine the precise meaning which he derives from the event. The event itself, the facts do not say anything, do not impose any meaning. It is the historian who speaks, who impose meaning... The universe speaks to us only in response to our purposes...”

However, the historian does his interpretation and selection of facts based on the criteria of relevance and significance as mentioned earlier. In other words, it is only what the historian considers to be relevant and significant in relation to the subject being studied that he selects as facts or tools to be used for his task of writing history, hence the role of historians in the writing of history in Nigeria. Furthermore, Carr (1961), has also captured the complex task of selection by the historian in these words:

History has been called an enormous jigsaw with a lot of missing parts... Our picture has been preselected and predetermined for us, not so much by accident as by people who were consciously imbued with a particular view and thought the facts which supported the view worth preserving.

From the above statement, the clear reason for this nature of history is the purpose of the historian which exerts great influence on his selection process. Because of this inseparable link Carr (1961), has suggested that the historian should be first studied before the facts, thus:

...the facts of history never come to us ‘pure’, since they do not and cannot exist in a pure form: they are always refracted through the mind of the recorder. It follows that when we take up a work of history, our first concern should be not with the facts which it contains but with the historian who wrote it... Study the historian before you begin to study the facts.

The Impact of Interpretation and Writing of History in Nigeria.

Some of the effects of interpretation and writing of history in Nigeria include: -

First and foremost is the enrichment of our minds with multiple images of events, places, peoples, ideas, and emotions outside our personal experience (Akombo 2015). This is true because a lot is now known about Nigeria's past which was not the case during the colonial and immediate post-independence periods. Most importantly, this is motivating younger and more passionate Nigerian historians to make new contributions by writing the histories of their various ethnic nationalities. Similarly, the government of Nigeria and Historical Society of

Nigeria (HSN) are encouraging scholars to give more attention to conducting research in Local history.

Another effect is that this influences the life of the community and the course of events. This is common among many ethnic groups in Nigeria. It is so because this is the type of knowledge common men carry around in the head. As such new information from history about each group is rushed at for its presumed value. For instance, the bonds shared by many groups in the past is still upheld today. We can find examples among the Jukuns due to their religio-political control in the past and also by the Fulani and Hausa in northern Nigeria due to the dominance of the Sokoto Jihad in West Africa and present northern Nigeria just to mention a few.

Furthermore, it greatly helps to inevitably picture the past in some fashion and this picture however little correspond to the real past which helps to determine people ideas about politics and society. Frankly speaking, Nigeria has displayed this severally particularly at the regional, continental and in international politics. For instance, Nigeria is among the top African countries that formed the Non-Alignment group during the “Cold War” period between the Eastern and Western Blocks in the 1970s. This could also be seen in its leading role in the creation of regional economic body Economic Community of West African States (ECOWAS) in 1975.

Lastly, it helps to correct the common image of the past by bringing it to test of reliable information. For instance, the Eurocentric view that Africa (including Nigeria) did not have a history is now corrected through the interpretation and writing of history by Nigerian historians today.

In conclusion, it can be seen from the above discourse that the role of interpretation and writing of history in Nigeria is inherently linked to the type of sources available for the writing of Nigerian history. In the same vein, the overwhelming responsibility of getting facts and the interpretation of it and writing of history solely rest on the historian. In other words, the task of interpretation and writing of history in Nigeria rest with the historian for he knows his sources and how to get his facts as well as how to interpret and write or reconstruct the history of Nigeria. In addition, the deployment of the skills of the Nigerian historians in the interpretation and writing or reconstruction of Nigerian’s past has greatly thrown more light and better understanding about the history of Nigeria and also improve historical scholarship in Nigeria significantly.

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USING ERP SOFTWARE FOR MSMEs: INDONESIAN CULTURAL IMPACT

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Abstract: *Micro, Small and Medium Enterprises (MSME) have a very large and crucial contribution to the Indonesian economics. Indonesian MSMEs absorbed around 97% of the national workforce. In 4.0 Industrial era, ERP is an inevitable business supporting needs. Using Focus Group Discussion method, we explore how MSMEs use ERP implementation. Our result found that educational background, and culture are factors drive less attention to the importance of accounting information, including awareness of the importance of ERP. Our analysis focused in how Javanese culture affects as the most Indonesian dominated culture. Our findings are: 1) Indonesian people tend to have low preferences to avoid uncertainty. People try to avoid uncertainty in the business world not by looking for accounting and financial information but rather by maintaining harmonization in their business and eliminating confrontation. 2) Pragmatic culture, people in Indonesia tend to be oriented that the truth really depends on the situation, context, and time. Therefore, people tend to easily adapt to changing conditions. During COVID-19 pandemic, MSMEs quickly adjusted their business by switching to industrial sectors. Decisions to change the industrial sector are more influenced by observations of the needs of the surrounding community, not based on accounting and financial information on the real conditions of their businesses. 3) People in Indonesia also have a culture of restraint. They tend to be cynical and pessimistic, including in addressing the information needs for their business. New things such as ERP for business management are also considered not a necessity, but sometimes they become a burden because it is inconvenient to simply record daily economic transactions.*

Keywords: *ERP, MSME, culture, accounting*

Introduction

The development of business processes requires business people to continue to change according to the times. However, previous studies have shown that SMEs do not consider the impact of Industrial 4.0 models, so they do not make many changes (Amit & Zott, 2001; Mittal, Ahmad, Romero, & Wuest, 2018). The development of industry 4.0, demands changes for organizations, not only digitizing but also how to have an extensive network. Moreover, the Covid-19 has changed the company's business model. Increasing the level of internet-based digitization is becoming more and more necessary. Numerous challenge of SME's financial reporting usage still need to solved (Ezeagba, 2017). The biggest challenge is integrated

transaction, reporting and decision making. Poor capability human resources increased their problem (Ezeagba, 2017). Accounting information system needed to make better decision making (Budiarto et al., 2018; Kim, Jang, & Yang, 2016). A good system increasing company's performance (Amit & Zott, 2001; Budiarto et al., 2018). SMEs must develop a system toward a digital transformation, a planned architecture needed for that purpose (Goerzig & Bauernhansl, 2018). Therefore we need a system that integrates all database. ERP provide comprehensive connected customer data, product data, cost data and some other data. ERP help SMEs owner to make a better decision The other challenge is fitting software with their ecosystem (Valenc & Alves, 2017). Despite of numerous problems, digitalization leads cost efficiency and organization development (Vasiljeva, Shaikhulina, & Kreslins, 2017).

There are many applications or software that can support MSME business processes in Indonesia. By taking advantage of technological advances, many system developers provide financial support applications for free that can be downloaded on application provider platforms such as the Appstore or Google Play store. Although widely available, these applications are generally difficult to apply directly to MSMEs because of the uniqueness of each MSME in carrying out their business activities. Therefore, for an MSME, designing an appropriate system is a necessity (Goerzig & Bauernhansl, 2018).

Indonesian SMEs play a strategic role in its economics. Its absorb 97% national work force. SMEs also contributes to 57% of Indonesia's GDP. In Indonesia, micro enterprises also include at SMEs classification. According that, we widened the scope of this research. is widened to micro, small and medium enterprises (MSMEs). This study use both quantitative and qualitative approach to describe MSME owners perception. In MSMEs owners plays important role in strategic decision. Owner perception will effect organization development. According previous research such as Chau & Hu (2002) ; Chin & Ahmad (2015) ; Davis, Bagozzi, & Warshaw (1992) ; Hamid, Razak, Bakar, & Abdullah (2016); Hussain, Mkpojiogu, & Yusof (2016) show evidence that user perception on ease-of-use will affect personal behaviour while accepting the new technology. We focused how culture make a great impact for owner decision for using technology. Ketrapapakorn & Kantabutra (2019) reveals that owner core value drive organizational culture development practices.

Literature Review

The main theory that underlies this research is the individual behavioral framework theory. This theory is a theory that explains the basis of a person's behavior. In this theory there are 4 interrelated elements, namely individual factors, environmental factors, individual's behavior and outcomes. The Individual Behavior Framework states that a behavior of an individual will differ from one another because it is influenced by the interaction between the environment and individual factors (Gibson, 2010). This person's intention will affect the outcome resulting from that person. Culture is one of the shapers of individuals both in individual factors and in environmental factors. A person with a certain ethnicity has brought certain basic characteristics that are characteristic of that culture. However, this trait is not only a personality brought by a person, but also due to the existence of a certain culture that applies to the environment that shapes a person's attitude.

Enterprise Resource Planning

ERP stands for Enterprise Resource Planning. This term combines three main concepts, namely enterprise, resources and planning in an information system. A previous meta-analysis study showed that developments in ERP research and practice have made this definition of ERP even more broad (Klaus, Rosemann, & Gable, 2000). ERP development to further assist business

development is still being developed (Awad, 2014). ERP implementation is not only limited to large companies. The application of ERP in MSMEs can help develop these MSMEs (Vasiljeva et al., 2017).

The results of previous studies show that ERP is able to increase the effectiveness of the performance of a business activity (Indarto, Ratnaningsih, & Endah, 2018). The application of ERP to assist inventory management has been widely used (Wiranto, Toha, & Supriyadi, 2020). More specifically, research (Nawawi & Yunia, 2021) proves that ERP is very helpful, especially in improving management control and improving company competitive management. The main advantage of ERP is in its ability to reduce costs and improve the quality of decisions that must be implemented.

Micro, Small and Medium Enterprises (UMKM)

Based on Indonesian Government Regulation No. 20/2008, Micro, Small and Medium Enterprises (UMKM) are defined as micro business is productive business owned by individuals and / or individual business entities (Safitri, 2020). It must have several criteria such as a productive economic business that stands alone. It means that they aren't subsidiaries or non-branch companies that are owned, controlled, or become a part either directly or indirectly from medium or large business enterprises.

Participant

This study uses participant of MSMEs in Central Java, Indonesia. Participant are chosen using snowball sampling method. First, researcher mapped MSME's group coordinator existed in industrial centre city at Central Java, such as Pekalongan, Tegal, Brebes, and Semarang. Second, we conduct ERP training for them. According to Indonesian pandemic rules that limited 30 person each training, we divided them into eight training series.

Method

After determining the participants who will take part in the study, the researcher conduct treatment for the participants. This research conducting three phases, as follows:

First Phase: Initial System Configuration.

At this stage the researcher gives an ERP software application account to each MSME. Researchers help each MSME to enter the data needed as an initial configuration before the software can be used. At this stage the researchers used the services learning method. This method is a learning model where students carry out learning methods, as well as provide services to the community. Where about fifty students were involved in this initial research phase. In this stage students helps MSME owners to identify financial data in the organization. They assist MSME owner to provide all initial financial data which ERP needs such as initial balance sheets, cost standards and product specifications are entered into the system. Because the ERP system is an integrated system, linkages are made between consumer master data, product master data, and raw material master data. All of this data is needed to help with online recording.

Second Stage: Training on the use of the system.

In this second stage, MSME owners are given training using ERP software. They are given the opportunity to record their transactions to the existing ERP. This second stage is carried out based on the TAM concept because of the ease of use of the system and the usefulness of the system carried out. Participants will have difficulty making decisions to use when they do not

understand the ERP software used. After trained, they should be used to operate this software. We expected them to get a better understand how to use ERP software. Thus, it is hoped that they will realize the benefits of this ERP software for their development.

Third Phase: organizing a Group Discussion Forum.

In this third stage, researchers measure their acceptance of the existing system. By using a quantitative descriptive approach, the researcher describes how the perceptions of participants in terms of business management and the use of financial technology are described. The results of this third stage are discussed as a result of this research.

Result and Discussion

The participants who took part in this study were MSMEs with diverse businesses. Broadly speaking, we try to identify and classify these business sectors into three namely production, services and trade. Comparison of the number of participants for each sector can be seen from the following picture.

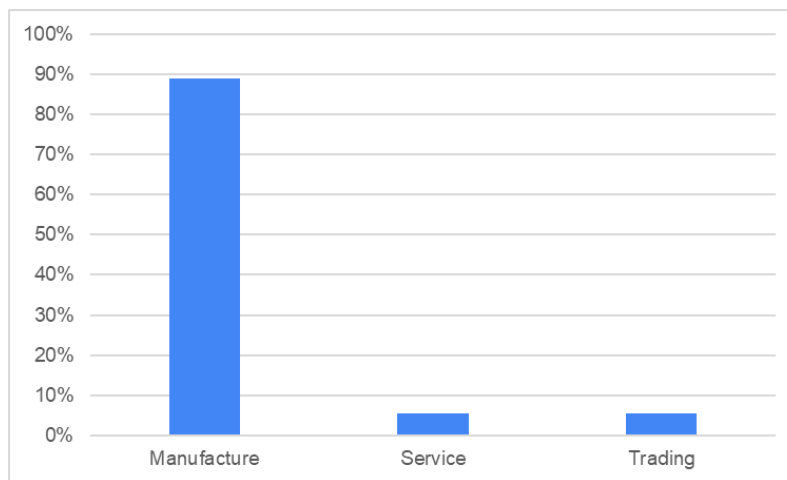


Figure 1: Business Sector

Source: processed data

Figure 1 show most of the FGD participants were SMEs in the manufacturing sector (89%). The manufacturing sector is indeed a sector with a high level of complexity in the use of accounting software. The complexity of the manufacturing sector occurs because of the production and trade processes. During the production process there is a change in inventory from raw materials processed by direct labor and support from manufacturing overhead. Most SMEs in Indonesia are in the manufacturing sector, especially the food industry. The food processing industry into ready-to-eat food is an industry that is currently booming. This industry is considered the easiest and most profitable for some SME entrepreneurs. Even during this pandemic, many entrepreneurs have shifted their business from other sectors (services/trade) to the food industry. The food industry sector is considered the most profitable sector because even during the pandemic, food remains a priority for goods sought by consumers.

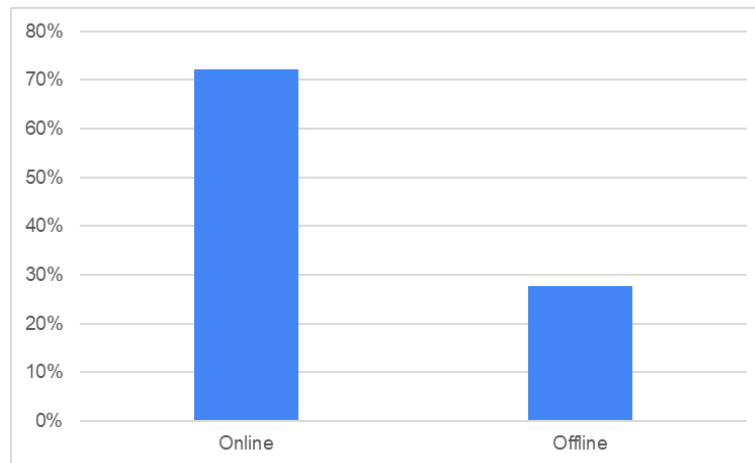


Figure 2: Marketing Method

Source: processed data

Most SMEs currently choose to use online media to sell their products. More than 70 percent of entrepreneurs who participated in FGDs also did the same method, as can be seen in figure 2. This method is considered the most effective during a pandemic.

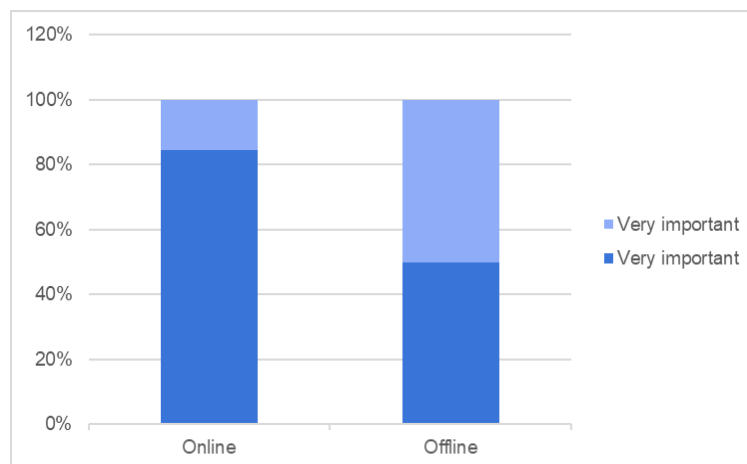


Figure 3: The Importance of Accounting Software

Source: processed data

Figure 3 shows that more than 85 percent of SMEs who use online marketing think that accounting software is very important more than SMEs whose offline marketing methods are only 50 percent. The experience of using online media makes SMEs better utilize information technology. This background experience makes these SMEs more consider important accounting software. They feel that utilizing information technology will facilitate the management of the business they run. SMEs who are experienced in using technology will feel that accounting software is easier to use. These entrepreneurs will feel that their infrastructure also supports the implementation of accounting software. Because of that, they are more enthusiastic about using accounting software than those who are unfamiliar with information technology. People in Indonesia who have a Restraint culture, often tend to be cynical and pessimistic, when they have to use something new. New things such as ERP for business management are also considered not a necessity, but sometimes they become a burden because it is inconvenient to simply record daily economic transactions. SMEs still feel more

comfortable when implementation is accompanied. Their existing business culture makes them feel less confident about using something new and learning independently. Its including awareness of the importance of ERP.

Data shows that almost all of our participant were Javanese. Even, Indonesia is widely known as a multicultural country, Javanese is the most dominant ethnic. Indonesia have approximately 364 ethnicities. Among of these ethnicities, the Javanese have come to be recognized over time as the most culturally and politically dominant in Indonesia. Javanese is the most Indonesian dominated culture and affected their behaviour.

Due that characteristic, this study analysis focused in how Javanese culture affects owner using technology. The common Javanese ethnic culture refer to three concepts: *madu basa*, *madu rasa*, and *madu brata* (Sutarto, 2006). *Madu basa* refers to how Javanese people should use good language and respectfulness each other, and more important to elder. Hence, *madu rasa* refers to obligation of good feeling consideration. *Madu brata* means a Javanese people must have a good restraint and contemplation. Using focus group discussion model, we try to picture Javanese culture which effects MSMEs decision to use ERP. There are several findings in this study. First finding is that our participant tends to have low preferences to avoid uncertainty. People try to avoid uncertainty in the business world. This action consistent with *madu brata* concept. They prefes to have a good restraint. So, they would avoid risk from uncertainty.

Other finding in this research is that they prefer maintaining harmonization in their business and eliminating confrontation than looking for accounting and financial information. So, their intention to use ERP system as their tools tend to be low. Even ERP will provide financial data to help them make a better decision, they prefer maintain relationship to develop their business. This is practice consistent with the concept of *madu basa* and *madu rasa* which is held by the Javanese people. The good relationship is the priority in Javanese culture according to *madu rasa*.

We also find that our participant has pragmatic culture. people in Indonesia tend to be oriented that the truth really depends on the situation, context, and time. Therefore, people tend to easily adapt to changing conditions. During COVID-19 pandemic, MSMEs quickly adjusted their business by switching to industrial sectors. Decisions to change the industrial sector are more influenced by observations of the needs of the surrounding community, not based on accounting and financial information on the real conditions of their businesses. Our participant also representation most people in Indonesia which have restraint culture. They tend to be cynical and pessimistic, including in addressing the information needs for their business. New things such as ERP for business management are also considered not a necessity, but sometimes they become a burden because it is inconvenient to simply record daily economic transactions.

Conclusion

There are high demand from MSMEs for the existence of a financial recording and reporting system. However, the level of intention to utilize the system is still very low. This is triggered by the existing culture in society that hinders their acceptance of the new system or technology. Therefore, it is better in the next research to focus more on the factors that can increase the desire of MSMEs in utilizing technology. Our findings shows that our participant tends to follow *madu basa*, *madu rasa*, and *madu brata* as consideration when they use ERP software. Similar research can also be carried out using other cultural points of view.

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DISEASE BEARING INSECT RESEARCH IN MALAYA BY JAPANESE SCIENTISTS DURING WORLD WAR II AND ITS POSITION IN INTERNATIONAL LAW

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Abstract: *Japanese scientists commissioned by the Imperial Japanese Navy (IJN) were tasked at the Nettai Igaku Kenkyusho or Institute of Medical Research (IMR) in Kuala Lumpur and other locations in Malaya during World War II (WWII) to identify cures for malaria, dengue, and scrub typhus rampant among Japanese troops in Southeast Asia. Such research on insects could contribute to biological warfare. This study identifies the background and destiny of these few Japanese scientists in Malaya conducting research on malaria, dengue and scrub typhus while evaluating if their research could have been an offense under international law at that point of time. A qualitative historical approach relying on documentation, soft law, treaties, and secondary resources obtained from archives and national libraries online from different countries and the Fold3-Historical Military Records website were referred. These documentation were classified according to names of Japanese scientists to form a short biography and to provide background information of the IMR during WWII. The results reveal some Japanese scientists responsible for malaria research at the IMR in Kuala Lumpur and Penang, and dengue research in Malaya, Singapore and Java. Human experimentation associated with dengue was suspected in Singapore. One IMR Japanese director had links with Unit 731. Kiyoshi Hayakawa, part of Unit 9420 in Singapore, Japan's subunit for its covert biological weapons programme conducted research on scrub typhus in Java and Malaya. These scientists continued as professors in Japan or were promoted to this position much later with one of them opening a medical company. Indeed, a gap existed in international law at the end of the 19th and early 20th century which failed to make experimentation illegal as a preparation stage rather than actual usage in warfare because of the omission to address the development, production and stockpiling of biological weapons.*

Keywords: *Malaya, malaria, dengue, Institute of Medical Research (IMR), biological warfare.*

Introduction

Throughout World War II (WWII) in Malaya (presently known as Malaysia after its independence in 1957 and will be used interchangeably in this study) from the period of 1941-1945, Japan the occupying force had sent some of its scientists to this colonial territory to conduct research in identifying preventive measures and looking for a cure for malaria, dengue and to distinguish between scrub typhus and tsutsugamushi diseases caused by insects. Japanese troops who invaded Malaya, and other countries in Southeast Asia were very vulnerable to the said diseases given the tropical climate which made the *anopheles* mosquito causing malaria and *aedes aegypti* mosquito causing dengue and also the mites causing scrub typhus to thrive. Japanese troops relied on quinine to cure malaria as Japan controlled the supply of quinine with its invasion of Java, Indonesia but still its soldiers succumb to malaria (Iijima, 2016, p. 362).

Given the above scenario, Japan needed knowledgeable microbiologist, parasitologist and entomologist ready to deal with malaria, dengue and scrub typhus when these maladies were brought back to Japan. By sending Japanese scientists to conduct research on these tropical diseases at Japan's occupied territories in Southeast Asia, this equipped them with experience to deal with these diseases in their home country. At the same time, this was for the furtherance of science since the cold climate in Japan was uncondusive for the research on malaria and dengue which was more prevalent in the tropics. Moreover, this was a chance for Japanese scientists to venture into a new research area of tropical diseases that was least explored by them at that time to bring prestige to their country with some new findings.

Research on disease bearing insects in Japan was sponsored by the Imperial Japanese Army (IJA), the Imperial Japanese Navy (IJN) and its Ministry of Education which all had different projects of interest (Setoguchi, 2007, p. 176). Moreover, the National Research Council under Japan's Ministry of Education in 1943 had organised many research teams, some of which would study insect borne diseases which resulted with the recruitment of many parasitologist and entomologist to be deployed abroad to Japanese occupied territories (Setoguchi, 2007, p. 177).

Underlying the Japanese scientists' research on these tropical diseases mentioned was the Allied powers fear that there was a hidden agenda of utilizing insects for biological warfare against Japanese enemies. Biological warfare refers to "the use of any disease-causing organism or toxins found in nature as weapons of war with the intent to destroy an adversary" (St. Geogiev, 2009, p. 221). Mosquitoes causing malaria and dengue, and mites which causes scrub typhus can be used as vectors for diseases unleashed on humans in particular targeted areas during war time. Keener (2020, p. 2) indicates "[w]hen a nefarious actor uses insects as a delivery system, it is its own category of biological warfare called 'entomological warfare'". Thus, the need to investigate if the nature of research by the Japanese scientists in Malaya could have led to covert biological warfare research that could be linked with Japan's famous Manshu Detachment 731 (in short Unit 731) based in Manchuria to arouse the suspicion of the Allied powers. Unit 731 also had a subunit in Singapore known as Unit 9420 (Harris, 2002, p. 76; Keiichi, 2010, p. 25). Moreover, the destiny of these Japanese scientists who conducted research on these tropical diseases mentioned will need to be investigated whether they survived the Pacific War to have illustrious careers in their home country or they could have perished. Simultaneously, there is also a need to examine international law at the end of the 19th and early 20th century whether the Japanese army's experimentation with malaria and dengue mosquitoes which does not involve large scale usage during warfare would have been an offense. With this background in mind, this study aims to identify the background and destiny of some of the Japanese scientists conducting research on malaria, dengue, and scrub typhus in Malaya during WWII while evaluating if their research could have been an offense under international law at that time.

Literature Review

Substantial literature written by various scholars (Fong, 2000; Galvin, 2003; Gold, 1997, Harris, 2002; Li, 1999, 2003; Tsuchiya, 2005) about Japan's testing and usage of biological weapons in China during WWII already exists. In comparison, little is known about Japan's biological warfare effort in Southeast Asia among countries such as Malaysia, Singapore, Thailand, Indonesia, and Burma as some scholars (Fong, 2000; Gold, 1997; Harris, 2002; Harris, 2003; Sidhu, 1991; Tsuchiya, 2005) have just mentioned these countries in scant passing without delving into further details on the Japanese activities in these countries. Lim (2020) has attempted to provide a more detailed account about Unit 9420, Japan's biological

production facility in Singapore being housed at the King Edward VII Medical College during WWII, and naming some Japanese medical scientists and army personnel involved when previous scholars have failed to provide a detailed account.

As for the case of Malaysia, scant literature currently exists about Japan's biological warfare effort namely in the writings by Majid (2017) which focused on the old Tampoi mental hospital in Johor and Tuanku Muhammad School in Kuala Pilah, Negeri Sembilan being the breeding ground for fleas and rats as the Japanese were cultivating plague to be sent to Thailand and henceforth to Burma during WWII. Apart from the states of Johor and Negeri Sembilan, Lim (2020) also mentions in scant passing about the Malacca High School in Malacca once being a breeding ground for flea by the Japanese army based on Tomosada Masuda's recorded film on Unit 9420 activities in breeding flea. While it is now known that at least three states in Malaysia were involved in Japan's biological warfare effort to cultivate flea to spread plague elsewhere, there could be other locations in Malaysia where the Japanese army and their scientists could have initiated other biological warfare initiatives which have not been explored. Lim (2020, p. 18) for instance, mentions briefly about the IMR in Kuala Lumpur being a suspected Japanese biological weapons facility under its director, Onari Kimura with malaria and dengue research being the focus. To date, no in depth study has so far been conducted about the background of any Japanese scientists who could have served at the IMR in Kuala Lumpur and the focus of their research in combating diseases such as malaria, dengue and scrub typhus. Ho (2006, p. 157) for instance, had highlighted that much remains unknown about the type of research being conducted at the IMR by the Japanese at its premises at Jalan Pahang, Kuala Lumpur during WWII. Some scholars (Khoo & Lubis, 2005, p. 286; Kratoska, 1997, p. 190) though have highlighted that the IMR during Japanese occupation had produced typhoid, paratyphoid A and B, cholera, dysentery and gonococcal vaccines, as well as supplying emetine hydrochloride injections among local Malayan hospitals and clinics. Therefore, there exists a gap in identifying who these Japanese scientists were, the focus of their research at the IMR during WWII and their final destiny after the war leaving a justification for conducting this study.

Besides the IMR in Kuala Lumpur, Japanese scholars (Iijima, 2016, p. 363; Iijima, Inoue & Ichikawa, 2021, p. 4; Setoguchi, 2007, p. 178) have referred to one prominent scientists, Manabu Sasa who had researched on malaria in his capacity as a Japanese navy officer who was posted to Penang, Malaya for six months in 1941. Nevertheless, an existing gap currently exists if there were other Japanese scientists whose identity remain unknown and could have been posted to other locations in Malaya to conduct research either on malaria, dengue or scrub typhus. This is another grey area which this study will attempt to fill the void of identifying any Japanese scientists who could have worked on any of these diseases mentioned elsewhere in Malaya.

Furthermore, it is already known that some of the earliest Japanese universities such as Tokyo Imperial University, Kyoto Imperial University, Tohoku Imperial University, other universities and colleges in Japan had served as recruitment centres for scientists from all backgrounds be it a bacteriologist, pathologist, parasitologist, entomologist, zoologist, and many more (Felton, 2013, p. 25; Harris, 2002, p. 19; Keiichi, 2010, pp. 25-26; Lockwood, 2009, p. 105; Vanderbrook, 2013, p. 13). In the case of scientists who had served with Unit 731 and its subunits, scholars (Devolder, 2015, p. 41; Harris, 2002, p. 337; Rawlinson, 2013, p. 78) have indicated that many of these scientists safely returned to Japan without undergoing any war crime trials for their wrong doings of producing biological weapons and conducting human experimentation to hold high positions within Japanese universities such as professors, deans or any other administrative posts, to head a big pharmaceutical company, conduct

research at research institutes or serve the private sector to earn fortunes. Thus in the case of Malaya, there is a need to investigate from which universities these Japanese scientists researching on malaria, dengue and scrub typhus had originated and their destiny post WWII. This being the case, the aim of this study to identify the background and destiny of some of these Japanese scientists who conducted research on the tropical diseases mentioned and to evaluate if their actions could have led to biological warfare have been justified based on the gaps identified from this literature review.

Moreover, scholars have identified the inadequacy of international law at the end of the 19th and early 20th century by referring to the soft law document called the Brussels Declaration of 1874, the two Hague Conventions (II) with Respect to the Laws and Customs of War on Land (with annexed regulations) of 1899 and 1907 [thereafter the Hague Convention of 1899 and 1907], as well as the 1925 Geneva Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare [hereinafter 1925 Geneva Protocol] which merely addresses the “use of poison and poisoned weapons” to imply the usage of biological weapons (Brungs, 1964; Vec, 2017). International law during this period of time had failed to address the production and stockpiling of biological weapons creating a gap (Bunn, 1970, p. 255; Levie, 1991, p. 342). Thus, any experimentation with microorganisms in the laboratory, mass producing these microorganisms for storage and eventual use, and human experimentation could be carried out by a belligerent state at that time as it was not illegal because international law omitted to address the above steps leading to the development of biological weapons. In this regard, it has to be examined if the Japanese army’s experimentation with malaria and dengue mosquitoes at the IMR in Kuala Lumpur and in Singapore during WWII would have been punishable under international law at that time which will be elaborated in another section of this study.

Methodology

This is a qualitative study which adopts a historical research approach defined “as the process of critical inquiry into past events to produce an accurate description and interpretation of those events” (Wiersma, 1982). As such, this study utilizes primary sources of documentation. Both Japanese and English language secondary resources were also referred in this study. Japanese resources were referred as this provided a wider range of written resources about Japanese scientific researchers which has been useful for this study.

The historical documents which were used in this study consisted of the United States (US) army and navy documentation during and after WWII, a war diary and other sources which were readily obtainable online from various websites such as the National Library of Medicine in the US, the National Library of China, the Fold3-Historical Military Records website, the Trove website of the National Library of Australia, the Singapore archives, the IMR library in Setia Alam, Selangor, Malaysia, the US archives, and various online databases and open source materials from Japan. Apart from primary documentation, these online websites were very useful in retrieving past newspapers to inquire about the background of the IMR during wartime, and the background of foreign researchers from Japan who served this institute at that time. Legal documentation which were referred include the Brussels Declaration of 1874, the two Hague Conventions (II) with Respect to the Laws and Customs of War on Land (with annexed regulations) of 1899 and 1907, the 1925 Geneva Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare and a Japanese case law of 2002.

Besides documents, this study also relied both on secondary resources consisting of Japanese and English publications of books, book chapters, journals, conference papers,

newspapers, magazines and internet materials to obtain an overview about the structure of the IMR during the Japanese invasion of WWII, to obtain the names and backgrounds of selected Japanese scientists and their research focus on malaria, dengue and scrub typhus and thereupon their destiny and career path after leaving Malaya post WWII.

All of these documents and secondary resources were analysed through a historical analysis which is “a method of examination of evidence in coming to an understanding of the past [...] contained in documents” (Bricknell, 2011, p. 108). All the information obtained were sorted and classified according to the names of the Japanese scientists as the aim was to obtain a short biography of them. By classifying and sorting all materials according to the Japanese scientists’ names, this had made it much easier for the write-up process which is descriptive and narrative being typical of historical research.

The Results of the Study

The IMR Structure during Japanese Occupation and Japanese Scientists Research

During WWII, the IMR in Kuala Lumpur, Malaya came under the control of two Japanese directors. They were respectively K. Sato and Onari Kimura. K. Sato became the director around November 1942 arriving from Japan (“Medical Research”, 1942, p. 2). Previously in Japan, Sato had worked at various health departments but not much has been revealed during his stint in Malaya (“Medical Research”, 1942, p.2). Efforts were made by the Japanese colonial master to reorganize the IMR in 1942 under the tutelage of Dr. J. Huziyosi, Director, State Medical Services in Selangor and with assistance from Dr. K. Ando, the Director of Medical Services in Singapore (Chelliah, 1942, p.3).

Under the Japanese leadership, the IMR came to be known as the *Nettai Igaku Kenkyusho* (Tropical Medicine Research Institute) and was divided into the following divisions. There was a malaria division being formed to undertake a microscopical examination of thick and thin blood films to screen for malaria parasites. Besides this, this division was tasked with identifying mosquitoes and larvae for the Japanese Health Department in screening for malaria.

Apart from this, the bacteriological division was also formed in the IMR. This division would look into the culture of blood and urine in diagnosing for typhoid, dysentery, and other infectious diseases. The said division would also undertake a bacteriological examination of the water supply, milk samples and other foods (Chelliah, 1942, p.3) Other functions of this division include a biochemical and microscopical examination of blood and urines and a chemical analysis of water and milk supplies (Chelliah, 1942, p.3).

In 1943, there was a change in leadership at the IMR whereby Onari Kimura became the head of the *Nettai Igaku Kenkyusho*. During his tenure, the IMR produced vaccines for cholera, typhoid, smallpox, diphtheria, and tetanus (“Anti-toxins to”, 1944, p.3). During Kimura’s time as director too, the IMR also produced gonococcal vaccines and emetine hydrochloride infections to local hospitals (Khoo & Lubis, 2005, p.286). When the war ended in 1945, Kimura left for Japan, but the local staff remained behind. However, the IMR was being stripped off most of its equipment with laboratories having to be reequipped (“Medical Research”, 1949). Moreover, other essential bacteria and viruses had to be flown from overseas to the IMR in Kuala Lumpur as the institute was more less stripped bare by the Japanese (“Medical Research”, 1949).

Onari Kimura

Of interest is the background of Onari Kimura who was a professor at Tohoku Imperial University in Sendai, Japan (Nichigai Associates, 2004). Kimura was born on 10 January 1883

in Kiyosu, Yamaguchi Prefecture and passed away on 29 June 1954 (Nichigai Associates, 2004). Kimura graduated in 1910 from Tokyo Imperial University School of Medicine majoring in psychiatry but later pursued his studies in pathology at Germany and France in 1884 (Nichigai Associates, 2004). By 1918, Kimura became a professor at Tohoku Imperial University and in 1929 became the president of the Japanese Society of Pathology (Nichigai Associates, 2004). Kimura once worked at the Department of Psychiatry at the Mukden Medical School in China. Peripheral and central nerves, tuberculosis and syphilis were some areas of specialization of Kimura. Besides being the director of the *Nettai Igaku Kenkyusho*, Kimura was also the director of the *Syonan Ika Daigaku* (Medical College) which had moved from Singapore to Malacca in 1944 (“Ika Daigaku being”, 1944, p. 11). When the Japanese captured Malaya, they had in mind to bring together the IMR which they referred as the Southeast Asia Medical Research Institute specializing in malaria together with other academic institutes to be part of the envisioned University of Greater East Asia or Syonan University with its base in Singapore (Singapore was then known by the Japanese as Syonan) (Shinsei, 1942, p. 2). This explains the reason Kimura was both the director for the *Nettai Igaku Kenkyusho* in Kuala Lumpur and the *Syonan Ika Daigaku* in Malacca, as the Japanese decided to integrate the IMR as part of Syonan University.

In a chapter written by Ichinohe (2016, p. 52) entitled “The Fifteen Years War and Tohoku Imperial University” which is part of the book on Unit 731, he mentions about Onari Kimura being the director of *Nettai Igaku Kenkyusho* in Malaya. Nevertheless, Ichinohe does not directly mention that Onari Kimura was part of Unit 731 but academics from Tohoku Imperial University during WWII whether willingly or unwillingly were recruited by the IJA to contribute to research for the furtherance of warfare. Based on Ichinohe’s writings, indeed there is a suspicion that Onari Kimura could have been part of the Unit 731 network and he was once stationed at the IMR in Kuala Lumpur, Malaya during WWII.

It remains to be seen someday whether the truth will ever surface if the IMR or *Nettai Igaku Kenkyusho* during Japanese imperialism in Malaya was ever used for any sinister activities as more evidence will have to come to light. It is only sufficient to note that one of the IMR’s Japanese director might have been part of Unit 731 as implied by Ichinohe’s writings and an individual of this stature is someone to be wary about. Notably after WWII, Kimura safely went back to Japan to continue his tenure as a professor at Tohoku Imperial University until he died.

Masahiro Ogaki

Besides Onari Kimura, two other Japanese researchers from the period of 1941-1945 were attached to the IMR. One of them was Masahiro Ogaki, attached to the IMR in 1945 as evident in his writings entitled “Bird malaria parasites found in Malay Peninsula” which was published in 1949 (Ogaki, 1949). In this article by Ogaki, it is evident there had been interaction with the local staff of the IMR, in this case being J.A. Chelliah who assisted Ogaki with his research. At this point of time, Ogaki served Kyoto University and was a young researcher. Ogaki survived the war and went back to Japan to have an illustrious academic career. At this juncture, Ogaki moved to serve the Department of Biology, University of Osaka Prefecture, Sakai, Japan. Ogaki’s concentration on malaria confirms that during Japanese occupation, the IMR had a malaria division. Ogaki himself was a graduate from Hiroshima University of Literature and Science and for a time served at the Kyoto Prefectural Daiichi High School as a high school teacher and later junior high school teacher (Osaka Prefecture University, 1983). He then went on to be employed at the National Institute of Genetics, Ministry of Education, Culture, Sports, Science and Technology in Japan (Osaka Prefecture University, 1983). Thereupon, Ogaki

became an associate professor at the Faculty of Education, Naniwa University which would later be known as Osaka Prefecture University (Osaka Prefecture University, 1983, p.7). Ogaki acquired his Doctor of Science from Osaka University and in his early 40s was promoted to a professor at the Faculty of Liberal Arts, Osaka Prefecture University (Osaka Prefecture University, 1983, p. 7). With seniority, Ogaki became a councillor at Osaka Prefecture University and retired at 58 years old (Osaka Prefecture University, 1983, p.7). He was later appointed as Professor Emeritus and passed away in 2012 (“Fōramu”, 1998, p. 205). Ogaki himself was born in 1920 and was even a consultant for the World Health Organization (WHO) (“Fōramu”, 1998, p. 205). Evidence has not come to surface so far if Ogaki was a member of the Japanese machinery for biological and chemical weapons, Unit 731 nor Unit 9420 in Singapore. In a journal paper written by another Japanese academician know as Masatoshi Iwata, he mentions that Ogaki had introduced him to military medicine (Iwata, 1952, p. 249). Iwata himself was working at the IMR together with Ogaki in the area of malaria and the former mentioned he had worked with monkeys which presumably could imply monkey malaria or the word monkey could refer to experimentation with humans (Iwata, 1952, p. 249). In disguising their experimentation on humans, the Japanese scientists were known to refer to them as monkeys when writing in journal papers (Harris, 2003, p. 481).

Masatoshi Iwata

As to the background of Masatoshi Iwata, he was born in 1897 at Arashima-cho, Shimane Prefecture (now Yasugi City) (Yamauchi, 2016, p.70). Iwata joined the Department of Animal Science, the Faculty of Science, Kyoto Imperial University in 1923 with his research focusing on caddisfly larvae (Yamauchi, 2016, p. 70). Upon graduation in 1927, Iwata moved to the Otsu Rinko Experiment Station attached to Kyoto Imperial University (Yamauchi, 2016, p. 70). Subsequently in 1930, Iwata transferred to Osaka Medical University (presently Osaka University School of Medicine), studying under Sadao Yoshida to focus on parasite research (Yamauchi, 2016, p. 70). During WWII, the IJN commissioned Iwata to conduct research on parasites at Papua New Guinea and Malaya (Yamauchi, 2016, p. 70). In a captured war diary from Guam Island, it has been indicated that Iwata whose pen name was also Seishun Iwata had published a number of articles and pamphlets on mosquitoes, namely on malaria and dengue and was also stationed at Kuala Lumpur (United States Medical Research Unit, 1946, p. 171). Moreover, the information on Iwata’s whereabouts during WWII, in the said dairy also made it into a column entitled “The War and Biological Sciences in Japan” which was published in 1946 in the journal *Science* but it was never mentioned that the source was from the said war diary (Gressit, 1946, pp. 756-757). Iwata himself admitted to working at the *Nettai Igaku Kenkyusho* in Kuala Lumpur during WWII conducting his research on malaria as indicated in his article “The Tendency of Research on Parasitology in Japan during the Pacific War” (Iwata, 1952). In 1952, Iwata was a professor at Nara University of Education who taught biology and thereupon retired in 1963 (Yamauchi, 2016, p. 70). In April 1963, Iwata subsequently lectured at Shimane University School of Medicine and later died at 100 years old in 1997 (Yamauchi, 2016, p. 70). At this point of writing and to the best of this author’s knowledge, there is no written evidence indicating Iwata was part of Unit 731 but a captured war diary by the US was suspicious of his research.

Kiyoshi Hayakawa

Apart from this, Iwata has also indicated that Kiyoshi Hayakawa had focused on tropical diseases with a focus on scrub typhus while at Singapore which was also mentioned in the IMR’s 50th jubilee document (Iwata, 1952, p. 251; Wu, 1951). In the Hill and Victor (1947)

report which focused on biological weapons, it is evident from an interview with Kiyoshi Hayakawa of 17 November 1947 that he had served in Singapore starting from 1942 and his study had focused on tsutsugamushi differentiating it from scrub typhus fever. Kiyoshi Hayakawa was the Director of the Japanese Army Institute of Preventive Medicine (*Nampogun Boekukusai Bu*) at the former King Edward VII College in Singapore (Kathirithamby-Wells, 2005, p. 257). Under the leadership of Hayakawa, scrub typhus research was conducted in Java, Sumatra, and Malaya (Kathirithamby-Wells, 2005, p. 257). In the post-war period, the Hayakawa Medical Company was formed employing former Unit 731 members (Harris, 2002, p. 178). Recent revelations of Unit 9420 members which was Japan's main research base for biological weapons in Southeast Asia has indicated that Hayakawa was one of its members (Nishiyama, 2019, p. 49).

Research on Malaria and Dengue Elsewhere in Malaya

Besides the research on malaria conducted at the *Nettai Igaku Kenkyusho* in Kuala Lumpur, research on mosquitoes have been conducted elsewhere in Malaya by researchers mentioned below:

Manabu Sasa

In Penang, for the first half of 1941 a researcher called Manabu Sasa who graduated from the Tokyo Imperial University School of Medicine in 1940 was a Japanese navy medical officer (Setoguchi, 2007, p. 178). While in Penang, Sasa conducted surgery for the navy in the morning while his afternoons were spent trying to learn about diseases in the tropics including malaria. Sasa was taught to distinguish which species of mosquitoes which caused malaria by the local Malayan doctors (Setoguchi, 2006). Having prior knowledge about the British literature on malaria, Sasa knew that substantial research had been done in this area. However, in Japan, there was little focus being given towards entomological research encompassing the taxonomy and ecology of insect vectors. The presence of Japanese troops in Malaya and other parts of Southeast Asia as well as the Pacific islands which had lots of *anopheles* mosquitoes causing malaria to take a toll on the Japanese army meant that extensive research by Japanese scientists was needed to look for a cure. Existing British papers concerning research on malaria was translated by Sasa to Japanese whereupon this valuable knowledge was transmitted to the Japanese Navy Medical School in Tsukiji, Tokyo (Setoguchi, 2006). The Japanese on their part were in awe with the British and Allied advancement knowledge in identifying the mosquito species causing malaria which indicated that the enemy were at the forefront of research in this area as compared to the Japanese (Setoguchi, 2006). Upon his return to Tokyo, Sasa became a part of the Institute of Infectious Diseases (also known as Denken) at the University of Tokyo and would continue his research on mosquitoes and medical entomology overall to reach greater heights in his career to become a professor. Sasa passed away in 2006 (Setoguchi, 2007, p. 178).

Noteworthy, the US Technical Mission to Japan after the war ended had prepared a report on the Pharmacology and Malariology in Japan – Civilian and Naval dated 7 January 1946 (US Naval Technical Mission to Japan, 1946). The US on their part conducted this investigative initiative to ascertain the form of malaria research being conducted by the Japanese Naval Medical College whether there was any suspicious research to raise the alarm. As it turns out to be, the report on Pharmacology and Malariology in Japan (US Naval Technical Mission to Japan, 1946, p. 38) had highlighted Sasa's research "on the prevention on malaria" and his research on the "biological examination of medicine for cure and prevention of malaria" which was conducted together with I. Miyao and H. Hosoya. At that

point of time, the US sent representatives to a substantial number of universities in Japan which were involved in wartime research to interview many researchers just in case there was any research to garner suspicion leading to the development of biological weapons and human experimentation. After all, in Rabaul, Papua New Guinea, a Captain Einosake Hirano of the Rabaul Water Purification Unit, an affiliated medical unit of Unit 731 based in Manchuria, China was found guilty of injecting tainted malaria blood from infected Japanese troops among Australia, New Zealand and American prisoners of war (Felton, 2012, p. 81). In Singapore too, a captured Indian soldier indicated that the Japanese army had experimented malaria on the prisoners of war on this island (Supreme Commander for the Allied Powers, 1947, p. 10). Therefore, it is only befitting for the US to further inquire if any other universities and institutes in Japan after WWII had conducted any research on malaria which could raise any misgivings.

Hidetake Yaoi

Besides malaria, the Japanese also conducted research in looking for a cure against dengue fever. One such Japanese researcher was Hidetake Yaoi who graduated from Tokyo Imperial University School of Medicine in 1920, became a technician at the Institute of Medical Science attached to the University of Tokyo in 1923 and obtained his Doctor of Medicine in 1926 (Arakawa, 1970). In September 1943, during WWII, Yaoi was temporarily commissioned by the Japanese War Ministry to conduct research on dengue fever in Malaya, Singapore, and Bandung (Arakawa, 1970, p. 578). Towards the end of October 1943, it was reported that Yaoi was visiting Nampo (the Southern region) to complete his research work on dengue as he had previously devised serum therapy against dengue fever (“Nippon doctor”, 1943, p.1). While in Singapore and Bandung, Yaoi conducted human prophylactic experiments and created fly antigens using monkeys (Arakawa, 1970, p. 578).

Yaoi features as an assistant to Saburo Kajima who was heading the manufacturing Department of the Institute for Infectious Diseases at Tokyo Imperial University as indicated in a document called “References from the Committee for the Technical and Scientific Survey of Japanese Activities in Medical Sciences” (US Naval Technical Mission to Japan, 1945) where both names are identified right after WWII. The said report was prepared by the Committee for the Technical and Scientific Investigation of Japanese Activities in Medical Sciences which was established in Manila in August 1945 to “examine and evaluate Japanese installations and personalities associated with medical sciences [...] and to correlate the activities of the medical section of the Enemy Equipment Intelligence Units” (Anderson, Hoff & Hoff, 1971, p. 229). Committee members visited overall 32 various Japanese universities and medical institutions with 200 individuals being interviewed to gain an insight about the kind of wartime research being conducted which could lead to the suspicion of producing biological weapons (Anderson, Hoff & Hoff, 1971, p. 229). Yaoi’s Manufacturing Department itself at Tokyo Imperial University was responsible for producing serums, vaccines, toroid, and other biologic products while his head, Saburo Kajima much later was determined to be a member of Unit 731, the Japanese secret unit for producing biological weapons in China (Shibata, 1996, p. 119; US Naval Technical Mission to Japan, 1945, p. 9).

Yaoi’s research work on serum therapy for dengue fever was enough to alert the Allied powers during WWII about the application of dengue for biological warfare. This research work was done together with another Japanese researcher named Seiji Arakawa. In an article entitled “The Fighting Scientists” written by Tsuji Sato in January 1944 in the Fuji magazine, the serum therapy concocted by Yaoi and Seiji Arakawa was hailed as a Japanese achievement to defeat the enemy (Allied Translator and Interpreter Section (ATIS), 1944). The serum therapy created was said to assist in bringing down high fever, pain and loss of appetite and

could reduce the number of Japanese troops inflicted with dengue fever at the Solomon Islands and Papua New Guinea (ATIS, 1944). Moreover, the Japanese were also concerned if dengue could be widespread within Japan when its army and navy returned to their mainland. In 1942 for instance, a navy ship returning from the Malay Peninsular brought the dengue fever to Nagasaki (LaCasse, 1949, p. 10). A puddle on the navy ship infested with the dengue mosquito larvae had caused dengue fever to eventually spread to other areas in Japan such as Kyushu and around the Kobe, Osaka, and Kyoto areas in the south of Honshu (LaCasse, 1949, p. 10). Therefore, Japanese parasitologist, entomologist and other scientists were being deployed abroad to conduct research for preventive measures and to look for a cure in combating diseases brought by mosquitoes as it was envisaged that more returning Japanese troops from the Pacific War would be afflicted with insect bearing diseases. The Allies during the war were concerned if dengue could be a “terrifying weapon in that the Japanese could inflict with dengue the many thousands of enemy troops which infest the Solomons and New Guinea” as this would have been a case of using insects and the disease they bring for biological warfare (ATIS, 1944). As Yaoi was commissioned to conduct research on dengue and possibly taking samples of these mosquitoes in Malaya and Singapore, this is a scientist to be wary about given the controversy of his research as highlighted by the Allies.

The International Law Gap to Address Preparations of Biological Weapons by the Japanese Army

Mid-19th Century – 1900

The Lieber Code that was signed by President Abraham Lincoln on 24 April, 1863 at the time of the American Civil War had set the precedent in prohibiting the use of poison during warfare (“The war of the rebellion”, 1899). Article 16 of the Lieber Code mentions that “it does not admit to the use of poison in any way”, which refers to the taboo of using poison (“The war of the rebellion”, 1899). Article 70 of the Lieber Code asserts that “[t]he use of poison in any manner, be it to poison wells, or food, or arms is wholly excluded from modern warfare. He that uses it puts himself beyond the pale of the law and the usage of war” (“The war of the rebellion”, 1899). Furthermore, in Article 13 (a) of the 1874 Brussels Declaration concerning the Laws and Customs of War, there is reference to the use of poison or poisoned weapons that implies the use of biological weapons (Brussels Committee, 1874). The negotiating history of the Brussels Declaration indicates of a phrased proposed which is “the use of poisoned weapons of the spreading, in any means whatsoever of disease on enemy territory” (Brungs, 1964). Much later, the word “spreading” was omitted and simplified as “the use of poison and poisoned weapons” as reflected in the final Brussels Declaration of 1874 (Brungs, 1964). Indeed, the reference to disease in the context of the phrase “the use of poison and poisoned weapons” garnered a few proposals in the debate of the Brussels Declaration. There was a proposal that “the use of poison and poisoned weapons” should be interpreted to forbid “the employment of all substances which are of nature to spread in the occupied country any contagion whatsoever” (Brungs, 1964, p. 48). There was also a view that disease should be left within the ambit of the Sanitary Convention as it was irrelevant to the Brussels Declaration (Brungs, 1964). In the end, the governments which were involved in the negotiations of the Brussels Declaration did not ratify this document. However, the Brussels Declaration is significant as it is a pioneer document with reference to diseases in the context of biological weapons.

Indeed, Article 23 (a) of the Convention (II) with Respect to the Laws and Customs of War on Land (1899) which prohibits the use of poison or poisoned arms traces its roots directly to the Brussels Declaration of 1874 (Hague Convention, 1899). The minutes of the two Hague

Conferences (1899 and 1907) indicated that the negotiators fully adopted the phrase “poison and poisoned weapons” without further changes to refer to the spread of contagious diseases as indicated in the previous Brussels Declaration (SIPRI, 1973, p. 96).

The Period 1900 – 1940s

Similarly, Article 23 (a) of the Hague Convention IV (1907) which forbids the use of poison or poisoned weapons takes after the wording from the Brussels Declaration of 1874. The reference to the Hague Conventions of 1899 and 1907, and Brussels Declaration was reflected in a court case relating to compensation claims by Chinese citizens who were victims of Japan’s biological weapon’s testing during World War II in Manchuria. The judge Koji Iwate asserted “there can be no argument with the statement that even at the time of the aforementioned Brussels Conference [of 1874,] germ warfare against countries involved in the fighting was to be prohibited” (Tokyo District Court, 2002, p. 5). This implies that the prohibition of biological weapons has been accepted as a norm for a long period of time to become customary international law. With regard to the Chinese plaintiffs reference to Article 23 of the Hague Convention for War on Land that prohibits poison and poisoned weapons, it was concluded that “Article 23 Section [II] – prohibiting the employment of ‘poison or poisoned weapons’- applies to biological weapons” as the Brussels Conference of 1874 had already affirmed this matter (Tokyo District Court, 2002, p. 5). Moreover, the judgment indicated “that the Hague Convention for War on Land had been established at the latest by 1911 as international customary law” (Tokyo District Court, 2002, p. 5). Since Japan had signed and ratified both the Hague Conventions of 1899 and 1907, it had the legal obligation to abide by its provisions.

Similarly, the Geneva Protocol (1925) which was signed but never ratified by Japan until 1970 also banned the use of asphyxiating, poisonous or other gases, which was extended to the prohibition and use of bacteriological methods of warfare. In the same Tokyo District Court’s judgment of 2002, it was reaffirmed that since “the [Geneva] protocol went into effect in 1928, by that time at the very latest the legal certainty regarding the protocol had been established among most nations of the world and that therefore that international customary law had been established based on the articles of the protocol” (Tokyo District Court, 2002, p. 5). Although the 1899 and 1907 Hague Conventions and the 1925 Geneva Protocol were written treaties that codified the ban of using poison, prior to this it has already been established through customary international law that such practice has long been barred.

While it has been widely accepted there exists in customary international law the prohibition to use biological weapons, throughout the end of the 19th century until 1972 there was a lacuna in the failure to have a binding agreement which would address the development, production and stockpiling of biological weapons. Japan conducted many experiments in laboratories and resorted to human experimentation in its quest to successfully develop biological weapons in China and its occupied territories in Southeast Asia including then Malaya. In this regard, this involved the production and development of biological weapons in large quantities to be stored for eventual usage against the Allies which involved stockpiling. Thus, it cannot be said that Japan had used biological weapons on a large scale on its enemies but human experimentation was definitely involved. This makes it a weak case to apply the Brussels Declaration of 1874, the Hague Conventions of 1899 and 1907 nor the 1925 Geneva Protocol banning the use of poison or poisoned weapons against Japan unless substantive evidence shows actual widespread usage of biological weapons against Japanese enemies.

Indeed, the gap in international law from the end of the 19th century in its failure to address the experimental phase to develop biological weapons which does not lead to its actual usage required that domestic law be applied to punish the Japanese wrong doers as reflected in

the Khabarovsk trial of 1949 (SIPRI, 1973, p. 141). The Japanese army involved in developing biological weapons were charged with having “prepared and used” bacteriological weapons (SIPRI, 1973, p. 141). It is for this reason that the Khabarovsk trial referred to the domestic law of the Soviet Union as reference rather than general international law *per se* because of the existing gap already mentioned.

Noteworthy, states which were parties to the League of Nations from the period of 1932-1934 had organised a Disarmament Conference with the intention to negotiate a Disarmament Convention based on a British draft text which came to naught (SIPRI, 1971, p. 37). Excerpts from the British draft text of the Convention do refer to the prohibition of preparing biological weapons as referred in Article 51 below:

All preparations for chemical, incendiary or bacterial warfare shall be prohibited in time of peace as in times of war (SIPRI, 1971, p. 168).

Moreover, the British draft text Disarmament Convention would have provided an avenue for any alleged complaints of states attempting to develop biological weapons as this was part of the preparation process through Article 55 which reads as:

The Permanent Disarmament Commission shall examine the complaints put forward by any Party which may allege that the prohibition to prepare for chemical, incendiary or bacterial warfare has been violated (SIPRI, 1971, p. 169).

In this regard, a Permanent Disarmament Commission would have the responsibility to investigate a complaint that a particular state was in the process of developing and producing biological weapons.

Unfortunately, the negotiations for a Disarmament Convention came to a halt around the period of 1934-35. Some factors which led to the breakdown in negotiations include the German withdrawal when Adolph Hitler took over Germany, Germany’s rearmament, the imbalance and unfairness of requiring Germany to disarm after World War I but excluding other major parties involved in this war, and there was a lukewarm response among other states to truly disarm. With the breakdown of negotiations, this failed to produce the first disarmament agreement which would have prohibited the preparation of biological weapons whether in laboratories, human experimentation and its mass production of stockpiling. In the words of Levie (1991, p. 342), the “League of Nations Disarmament Conference discussed the matter and attempted, albeit unsuccessfully, to draft a treaty which would have prohibited the production and stockpiling of both chemical and biological weapons”. In the end, international law merely succeeded prohibiting the use of biological weapons with the existence of the 1899 and 1907 Hague Conventions, and 1925 Geneva Protocol mentioned earlier. If the Disarmament Convention had succeeded in coming into being, this may be a deterrent to Germany and Japan before and during WWII to embark on developing and producing biological weapons but this was not to be the case. It was not until 1972 when the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons came into being that the preparatory process of developing biological weapons was being monitored.

Based on the analysis of international law which merely prohibited the use of biological weapons from the end of the 19th century up till the mid-1940s but not its development, production and stockpiling, it seems that the Japanese experimentation with malaria mosquitoes at the IMR laboratory in Kuala Lumpur and dengue mosquitoes in Singapore if ever intended for entomological warfare cannot be classified as an offense as the “use” of

poison since there was no evidence of large scale usage. This assertion is made based on the Brussels Declaration of 1874, the two Hague Convention of 1899 and 1907 as well as the 1925 Geneva Protocol which merely prohibited the use of poison and poisoned weapons. Given the gap in international law at that time, the Japanese army would have been free from any accusations of wrong doing for experimenting with microorganisms and biological agents as this was not tantamount to usage.

Conclusion

In conclusion, this study managed to identify the background and destiny of few Japanese scientists conducting research on malaria, dengue, and scrub typhus in Malaya while the dengue research of one of them could have been meant for biological warfare as suspected by the Allies. Much later now in the 21st century, evidence has surfaced to show that some of these scientists have been associated with Unit 9420 and Unit 731, the Japanese covert biological and chemical warfare programmes. For the scientists who were associated with biological warfare or conducted human experimentation, they were never punished for their misdeeds but safely went back to Japan to resume their normal life and hiding their dark secret with hopes of no revelation. It was most unfortunate too that the Japanese army's experimentation with malaria and dengue mosquitoes would not have been illegal in international law during WWII because existing soft law and treaties at the end of the 19th and early 20th century merely addressed the usage of poisoned weapons to encompass biological weapons but not its preparation stage to include experimental research. As for the research at the IMR, more studies needs to be done to reveal other Japanese scientists who had worked on vaccines for typhoid, paratyphoid, cholera and other diseases of concern during WWII as there exists a gap in this area for future research. Moreover, it is integral to reveal more locations in other Malaysian states which could have contributed in some way to Japan's biological warfare effort but still remains unknown besides Johor, Negeri Sembilan, Malacca and the town of Kuala Lumpur where the IMR is located. For the sake of enriching Malaysia's missing history concerning biological warfare during Japanese occupation, scholars are encouraged to overcome these hurdles of obtaining past documentation available mostly abroad to produce scholarly work for the record and knowledge of future generations. This way, Malaysians and other scholars worldwide will get a better picture about Japanese biological warfare efforts how little it may be in then Malaya as this is a mystery waiting to be unravelled.

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TRADE OPENNESS AND ECONOMIC GROWTH

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Abstract: *This study analyzes the long run relationship between trade openness and economic growth in the developing country and developed country by looking for the most influence indicator. In general, many studies have found a positive link between foreign direct investment and capital formation, which subsequently, indicate the relationship between trade openness and economic growth without considering the important role of export and import. Thus, this study will review the important of export and import as the indicator of trade openness.*

Keywords: *Trade Openness, Economic Growth, Thailand, Japan developing country*

Introduction

Trade openness to economic growth is one of the macroeconomic issues studied in the field of international trade that has piqued the interest of researchers. Various econometric tools have been used by researchers over the last few decades on various objective and subjective measures of trade openness in order to establish a strong relationship between trade openness and economic growth. For generations, economists have debated the effects of trade openness on economic growth. Trade openness is a multifaceted concept that can be traced back to FDI, labor mobility, R&D, technology, and knowledge.

Due to a lack of data, one of the dimensions, trade index, is not included in this study. Meanwhile, the study concentrated on trade openness, which is defined as the sum of imports and exports as a percentage of GDP (GDP). There was plenty of empirical evidence to support or refute trade openness as a driver of economic growth, especially in developing countries. This study looked at the effects of trade openness on economic growth in developed countries like Singapore and Japan, as well as developing countries like India (Thailand and Indonesia). Aside from differences in the size of the economies and the overall level of development proxied by GDP per capita, higher export and import shares to GDP may reflect a country's technological prowess and its industries' ability to boost growth through exports and/or imports of technology, production-related factor inputs, and intermediary products.

Essentially, this means that increased trade integration, and particularly internationalisation through exports, may not be directly related to the government's application of the trade-related 'neutrality principle.' According to this hypothesis, Busse and Koniger discovered that the relationship between trade openness and growth is primarily determined by trade specification [8]. Furthermore, they argue that it is critical to investigate the relationship within a dynamic framework. ASEAN countries have been at the forefront of promoting trade openness in order to generate high economic growth over the last decade. Many studies use foreign direct investment and capital formation as indicators to show the effect of trade

openness on economic growth without taking into account the effect of both indicators of trade openness, export and import. As a result, this study will investigate the significance of export and import in order to demonstrate the impact of trade openness on economic growth.

Literature review

Awokuse (2008) examined the bidirectional relationship between imports and GDP in Argentina and Peru, as well as the export-led growth (ELG) and import-led growth (ILG) hypotheses in Argentina, Colombia, and Peru. Vogiatzoglou and Nguyen (2016) investigated the long- and short-term relationships between foreign direct investment, import, export, and gross domestic product in ASEAN 5. Using time series data from 1980 to 2014, this study discovered that foreign domestic investment, imports, and exports had a significant impact on ASEAN 5 economic growth. Their findings backed up export-led growth as a major contributor to economic growth.

Pistoresi and Rinaldi (2011) used co-integration analysis and the causality test to investigate the relationship between real exports, imports, and GDP in Italy from 1863 to 2004. The study discovered a strong bidirectional relationship between imports and exports, as well as increased intra-industry trade. These findings indicate a lack of support for export-led growth (ELG) and import-led growth (ILG) (ILG). Furthermore, their findings show strong effects of import-led growth (ILG) on GDP in 1963-1913, as well as a bidirectional relationship between import and export from 1951 to 2004.

Sato et al. (2011) investigated the link between export, import, and trade openness in South Korea. When North Korea was still a developing country, they relied on export led growth (ELG) and import substitution, according to their research. Klastra (2011) discovered a long-run relationship between export and growth in Turkey and Pakistan.

Herrerias and Orts (2011) investigated the effects of imports and investment on labor productivity and output in China from 1964 to 2004. This study focused on the advancement of technology in China's economy through capital accumulation and its impact on the country's industrialization development. The study discovered that import has a consistent effect and is positively related to labor productivity. In other words, imports and investments boost labor productivity over time. The study also discovered that exchange rates had an effect on China's output during the time period. Exchange rate is one of the determinants for volume of imports hence it has been affecting China's output. Herrerias and Orts results supported the Import-Led Growth Hypothesis for China during 1964 to 2004.

Klastra (2011) discovered a long-run relationship between export and growth in Turkey and Pakistan. Klastra used the Autoregressive Distributed Lags (ARDL) model to investigate the long-run relationships between the determinants of economic growth in Pakistan and Turkey. In the short run, empirical findings suggested bidirectional causality between trade openness and economic growth in Pakistan and Foreign Direct Investment and exports in Turkey. Furthermore, it demonstrates that, in the long run, economic growth Granger-caused exports in Turkey and trade openness Granger-caused real economic growth in Pakistan.

In recent years, as China has become the world's largest exporter, its central bank has intervened in the FOREX market to maintain control over its currency or to keep the Yuan undervalued, making imports prohibitively expensive. As a result of these factors, many critics believe that the Yuan's depreciation is unavoidable. Herrerias and Orts, on the other hand, presented an alternative viewpoint; their findings show that imports are a significant engine of growth; if and when the Yuan appreciates, imports will become cheaper, stimulating further growth in the long run.

Katircioglu and Katirciolu reported similar findings (2011). The Import Led Growth (ILG) Hypothesis was tested for North Cyprus in this study by estimating the long-run relationships and causal relationships between exports and real income. They discovered no long-run causality between imports and income growth. This is because these island economies were heavily reliant on imports of goods and services. Sharma and Smyth (2009) investigated the Export-Led Growth (ELG) and Import-Led Growth (ILG) hypotheses for Fiji, Papua New Guinea, the Solomon Islands, Tonga, and Vanuatu. They analyzed time-series data from 1982 to 2004 using the Unit Root Test, Co-Integration Test, and Granger Causality Test. It was discovered that there was a causal relationship between economic growth, export, and import in the long run. They argue that trade liberalization policies foster economic growth.

Thangavelu and Rajaguru (2004) analyzed data from nine Asian countries in rapid development. According to their findings, trade plays an important role in productivity, which leads to economic output growth. Meanwhile, imports play an important role in trade and economic growth in a variety of ways. This finding demonstrates that exports and imports are equally important for an Outward-Oriented Economic Strategy. Except for the United States, Iceland, and Italy, Islam et al. (2012) tested Granger causality (and ARDL) between import and economic growth in 62 countries and discovered an indirect long-term relationship between import and growth. Except for Madagascar and Mauritania, their study found a two-way long-term causality relationship between imports and economic growth in low-income countries. This finding demonstrates that the impact of trade openness on economic growth differs between high-income and low-income countries.

When different variables are used, the second category of literature acknowledges the negative impact of trade openness on economic growth. Ulasan (2015) discovered that trade openness alone has no effect on economic growth by using indicators such as current openness, real openness, import duties, and the fraction of open year. This finding also implies that lower trade barriers were not associated with higher growth.

Conclusion

According to the previous study, the combination of export and import benefits economic growth. According to the majority of previous research, export and import play an important role in generating economic growth in terms of trade openness. Exports and imports both have a positive impact on economic growth, which is especially beneficial to developing countries. It's because developing countries lacked the resources and expertise needed to produce certain goods and services. Nonetheless, countries erect trade barriers such as tariffs and import quotas to protect domestic industries. Aside from that, the empirical and theoretical literature reviewed revealed that trade openness has a significant and positive impact on the growth of economic activities, which in turn increases productivity while increasing economic growth. As a result, this study demonstrates the significance of export and import as indicators of trade openness to economic growth in developing and developed countries.

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REDISCOVERING THE DIGITAL SEGMENTATION OF ORGAN DONORS IN MALAYSIA: AN EXPLORATORY REVIEW

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Abstract: *Effective insights about market segmentation provide important information for social marketers in formulating a sound marketing plan. This importance could also be observed in the context of the digital segmentation of organ donors in Malaysia. Digital segmentation has become a crucial element in organ donation promotion as fuelled by the rapid shift to the digital world especially social media. In this sense, a sound marketing campaign for organ donation promotion is critically needed due to the low rate of organ donation registrations among Malaysians. Therefore, by focusing on people's inclination to shift to social media and the importance of organ donation in Malaysia, the current study presents a systematic literature review to examine the potential of market segmentation regarding organ donation promotion via social media. The current study successfully identified university students as the digital target segment for organ donors in Malaysia. This study also observed a massive opportunity to discover a new market segment due to the rapidly increasing number of digital users and the anticipated higher demand for organ donation in the near future. Additional research could optimise the current study findings to further study the effectiveness of organ donation campaigns. Besides that, stakeholders such as the Ministry of Health Malaysia could benefit from current research findings in formulating a sound organ donation marketing campaign.*

Keywords: *Marketing, Organ Donation, Organ Donors, Digital Segmentation, Malaysia*

Introduction

The marketing experts have recognised that the consumers are uniquely from each other (Haghshens, Abedi, Ghorbani, Kamali & Harooni, 2013; Nazarov, 2020). In other words, the consumers are not alike nor not same among them. Thus, the market segment is useful to perform in objective to categorising consumers and identifying the niche market for specific products or services (Walsh et al., 2001). Armstrong and Kotler (2005) defined the market segmentation as dividing a market into distinct groups of buyers who have distinct needs, characteristics or behavior and who might require separate products or marketing mixed. Based on this definition, the main purpose of market segmentation is to align on what the marketer offers with the right customers which is for whom best suited with the product or services.

The concept of commercial segmentation has been widely applied to the social marketing including public health related campaigns as generally (Evans, 2016; Hefler et al.,

2020). Andreason (1994) defined the social marketing is the adaption of commercial marketing technologies to programs designed to influence the voluntary behavior of target audiences to improves their personal welfare and that of the society of which they are a part. Evans (2016) mentioned that there are several criteria for effective social marketing segmentation such as being reachable through communication in an affordable way and be substantial enough (large enough) to potentially have a meaningful public health impact. In addition, Evans (2016) also stressed that the rapid growth of digital media technologies has impactfully changed the landscape of segmentation in the last two decades. This phenomenon also can be observed on the rapidly increase the number of social media users across the worldwide including Malaysia (Number of social media users worldwide, 2018; Suruhanjaya Komunikasi dan Multimedia Malaysia, 2017). Recent studies found that the social media could be an effective platform to promote the campaign to increase the organ donation registration (Bail, 2016). However, there are still limited studies determining the effectiveness of social media in promoting organ donation (Blair & Alfred, 2018).

Besides that, the shortage of organ donors is a pressing issue around the world including Malaysia (Tocher, Kelly & Neades, 2018; Bastani, 2019). This issue has led to the development of strategic initiatives such as promotion and marketing in order to increase the rate of organ donor registration (Add; Bail, 2016). However, there are limited discussions in context of organ donation associated with marketing and promotion (Akgun, Bilgin, Tokalak, Kut & Haberal, 2003; Oetjen, Fottler & Unruh, 2015; Falomir-Pichstor, Berent & Pereira, 2013; De Groot, Van Hoek, Hoedemaekers, Hoitsma, Schilderman, Smeets & Van Leeuwen, 2016; Zouaghi, Chouk, & Rieunier, 2015). Blair and Alfred (2018) mentioned that there is a significant potential of organ donation promotion that still remaining largely unrealized for leveraging the registration as organ donor.

Why is this study significant? As we look to the critical shortage of organ donors registration that pressing around the world including Malaysia, it is calls for formulating a sound marketing campaign to stimulate the registration of organ donation among the citizens. One of important factors to formulate a sound marketing campaign is to identify a suitable market segment. In addition, the highly shifting of public behaviour to the digital world requires the process of segmentation should be include the element of digital behaviour. Therefore, the segmentation that includes the digital behaviour will produce effective outcome in predicting the engagement of campaign with target audiences. Hence, the purpose of this study is to identify or discover the digital segmentation of organ donors which could be the worthy segmentation for potential of organ donors.

Method

In order to achieve the aims of this study, the current study conducted a systematic literature review by using a pre-specific search and also inclusion criteria. The researchers use several research terms which are derived from the main keywords; - “organ donation”, “organ donor”, “market segmentation”, “social media segmentation”, “Malaysia” and “digital segmentation”. The search term or keywords were used to search on several online databased such as Science Direct. In addition, the inclusion criteria that used in the process filtering articles is the intention to register as organ donors. The selected or potential articles were going through the process of reviewed the abstract and also the full text.

Result and Discussion

After successfully performed the screening process, the current study found several written papers or articles that highly significant in discussing the market segmentation in context social

media and organ donation. All of that studies that has been selected are published peer reviewed articles which is ranging from conceptual and descriptive papers.

Based on the elements and factors that discussed on previous articles, the current study come out with suggestion that the suitable digital segmentation for organ donation campaign promotion are public undergraduate university students in Malaysia. Firstly, the university students were chosen as a digital segmentation due to one of important factor in context of Malaysia which is based on the recommended of the Evolution Report 2014, Transplantation Unit, Medical Division, Ministry of Health Malaysia (MOH). In this regard, the Evolution Report 2014 recommended on focusing the category of youth ages for organ donation campaign which in refers to universities students. Youth or 'Belia' in Bahasa Melayu is characterized as people between the age of 15 years and 40 years (Malaysia Youth Policy). In this light, the common age for enrolling in undergraduate programmes in Malaysian public universities in Malaysia is between 20 to 23 years old (Ministry of Higher Education Malaysia, 2019). Furthermore, Department of Statistic Malaysia (2017) mentioned that the category of working age in Malaysia is between 15 years to 64 years old which as seen an increasing number from 67.9% (2016) to 68.1% (2017). In fact, in 2017, the population in Malaysia is estimated to grow in rate of 1.3% for all categories of the population including youth (Current population estimates Malaysia, 2017). Meanwhile, for statistics in context of higher education institution in 2018, found that 338,563 youths are studying for their Bachelor and 99,547 are studying for their Diploma (Ministry of Higher Education Malaysia, 2019).

In addition, the university students as digital segmentation refers to public universities in Malaysia and not private universities in Malaysia because the number of student's enrolment in public universities is higher (MOHE, 2019). Additionally, in term of the usage of health related information on online platform, public universities of student are the highest group of users who access health information on online platform than students of private universities (Montagni et al., 2018). Also, the public universities students were reported to have more ability in access and manage information from social media in compared to the private university students (Abdul Karim et al., 2012). Moreover, in term of usage of social media, students in public universities have higher tendency to use social media platform to access information compare than students of private universities (Hanum et al., 2013; Mpungose, 2020). Besides that, several previous studies found that here are not much previous studies that found statistically significant correlation between type of faculty and positive behaviour towards organ donation (Feeley & Servoss, 2005; Canova et al., 2006; Akgün et al., 2003; Perenc et al., 2014; Kocaay et al., 2015). Alternatively stated, the type of faculty enrolled by university student has not significantly influence their positive behavioural towards organ donation context.

Furthermore, the university students are considered as important and valuable segment to target in campaign of organ donation because the students are characteristically young and healthier which made them perfect and suitable for organ donation (Feeley & Servoss, 2005; Stefanone, Anker, Evans & Feeley, 2012). Additionally, this segment are often engaged with dangerous activities which sets them to be highly eligible for organ donation death (Feeley & Servoss, 2005; Stefanone et al., 2012; Usamah & Anuar, 2017). The willingness of university students to register as organ donors are higher compared to other segments of demographic (Radecki & Jaccard, 1997; Reubsat et al., 2005). Moreover, university students are considered to be in the pre-contemplation stage of behavioural change which means many students still lack knowledge and awareness about organ donation and the campaign will have much impact towards their decision to register as organ donors (Feeley & Servoss, 2005).

Moreover, most undergraduate students are in the early stage of adult life compared to the students that are taking Master Degree and Doctorate Degree who had been exposed to various life experiences which could hinder attitude change (Carlson, 1971). Therefore, this study focused on undergraduate students in Malaysia.

Besides that, the social media plays an important role in life of university students where students frequently use social media for gaining knowledge as well as for academic purpose (Naidoo, Govender, Stead, Mohangi, Zulu & Mbele, 2018). Majority of university students claimed to have various accounts of social media sites such as Facebook, Twitter, Instagram, YouTube and etc (Tess, 2013). Gritton et al. (2017) mentioned that there is a dramatic increase the usage of social media among youths from 2006 where social media use was recorded at 55% and the number shows significantly increased to 76% in 2015. This indicates a significant change in favouring the direction to disseminate information for the youth (Gritton et al., 2017). Moreover, Stevens et al. (2016) stated it is estimated that 81% of youths are users of social media. In context of Malaysia, Yusop and Sumari (2013) stated that 88% of the Malaysian youth are actively engaged and using social media platform. Based on the aforementioned discussion, it is evident that university students are the appropriate target segmentation due to comprising majority of social media users and are also valuable organ donor candidates. In other words, the university students are the most suitable of digital segmentation for organ donation related campaigns.

Conclusion

The use of digital segmentation could increase the effectiveness of health campaign outcomes. This is also applicable for the organ donation campaign that targeting individual behaviour to have a positive intention or willingness to register as organ donors. The current study suggested that the university students are a worthy and suitable digital segmentation for organ donation promotion campaign. Moreover, the university students are appropriate target segment for organ donation campaign as they are more likely to become organ donors. Returning to the objective of this study, it is now possible for organ donation campaign to formulate a better digital promotion campaign especially social media platform due to the possibility of targeting the suitable or better segmentation. The better target segment will translate for better effectiveness of organ donation campaign. In addition, future research is needed to establish on how this segment could react to communication campaigns in context of social media or online platforms. For example, the communication campaign that focusing in area of message characteristics. As overall, the result of this study will be useful for relevant authorities such as Ministry of Health Malaysia (MOH), in developing an exceptional online or digital organ donation campaign in Malaysia.

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PERLINDUNGAN KEMASLAHATAN KANAK-KANAK DALAM PERKAHWINAN: SATU PENELITIAN MENURUT HUKUM SYARAK

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Abstrak: Perkahwinan kanak-kanak adalah merupakan isu sosial yang sering mendapat perhatian terutamanya dalam kalangan masyarakat beragama Islam di Malaysia. Ini kerana sekiranya kemaslahatan kanak-kanak tidak diberikan perhatian seperti yang digariskan oleh hukum syarak, maka dikhuatiri mampu menyebabkan ancaman terhadap diri dan masa depan yang bakal ditempuhi oleh mereka. Perlindungan kemaslahatan tersebut penting bagi mengelakkan kebarangkalian berlakunya penganiayaan terhadap hak asasi kanak-kanak berpunca daripada kecuaiannya pihak yang sepatutnya memikul tanggungjawab tersebut. Oleh yang demikian, kertas kerja ini bertujuan membincangkan tentang aspek-aspek kemaslahatan kanak-kanak yang wajib diberikan perhatian dan perlindungan sebelum terbentuknya ikatan perkahwinan. Kaedah kajian kepustakaan digunakan bagi mengumpulkan data untuk dianalisis mengikut metode analisis kandungan. Hasil penulisan menunjukkan bahawa hukum syarak telah menetapkan bahawa terdapat aspek-aspek utama yang wajar dilindungi oleh wali perkahwinan bagi yang menjaga kemaslahatan kanak-kanak. Kesemua aspek tersebut seharusnya diberikan keutamaan sebelum perkahwinan berlangsung bagi mengelakkan kemudaratan terhadap kanak-kanak sepanjang tempoh perkahwinan.

Kata Kunci: Kemaslahatan, Perkahwinan Kanak-kanak

Pendahuluan

Pada zaman kini, isu penganiayaan dan pencabulan hak asasi kanak-kanak berpunca daripada perkahwinan bawah umur hangat diperbincangkan terutamanya yang melibatkan individu beragama Islam. Tidak dinafikan hukum syarak membenarkan wali untuk mengahwinkan kanak-kanak yang di bawah jagaannya. Akan tetapi kuasa perwalian tersebut seharusnya dilaksanakan dengan penuh ketelitian dan keadilan bagi mengelakkan sebarang kezaliman terhadap diri kanak-kanak seperti yang ditekankan oleh hukum syarak. Perkahwinan yang dilangsungkan seharusnya menyuntik rasa kebahagiaan dan ketenangan dalam jiwa kanak-kanak. Sebaliknya sekiranya wali alpa dan tidak menitikberatkan aspek-aspek kemaslahatan diri kanak-kanak, maka perkahwinan tersebut hanya akan memberikan kemudaratan dan kesengsaraan pada kanak-kanak tersebut.

Kemaslahatan Kanak-Kanak dalam Perkahwinan

Secara asasnya, menurut al-Syatibi menjelaskan bahawa tujuan hukum syarak adalah untuk mewujudkan kebaikan buat seluruh manusia dengan mengharuskan perkara-perkara yang bermanfaat dan mencegah daripada perkara-perkara yang bakal merosakkan diri mereka (al-Syatibi, t.t). Konsep asas yang dijelaskan oleh ulama berhubung falsafah pensyariatian hukum syarak ialah bagi memberikan kemaslahatan dan menolak kemudaratan. Ini adalah kerana

setiap perkara yang diharuskan dalam Islam pastinya mendatangkan kebaikan buat insan sekiranya dilaksanakan dengan kaedah yang tepat mengikut al-Quran dan as-Sunnah (Abdurrahman Kasdi, 2014). Oleh yang demikian, keutamaan dari sudut penentuan kemaslahatan di bawah Maqasid as-Syariah adalah memfokuskan kepada aspek *dharuriyyat* yang merupakan perkara-perkara asas bagi setiap insan untuk meneruskan kelangsungan hidup di dunia, dan tanpa kewujudannya akan menyebabkan kerosakan dan kemusnahan dalam diri insan.

Penurunan syariat Islam termasuklah perkahwinan hanya untuk memberikan kemaslahatan insan dalam kehidupan di dunia dan memberikan pengakhiran mulia di akhirat kelak. Haruslah difahami bahawa aspek-aspek kemaslahatan yang dititikberatkan dalam Islam tidak hanya terbatas untuk kebaikan di dunia, malah memberikan ganjaran besar di akhirat kelak. Antara objektif syariah yang utama bagi perkahwinan ialah bagi memelihara keturunan dan menjaga kehormatan diri manusia supaya tidak dicemari dengan dosa kemungkaran di sisi Allah SWT. Ikatan perkahwinan akan mengangkat darjat insan dengan tanggungjawab perkahwinan yang wajib dilaksanakan. Menurut Jerimiah (2013) menjelaskan bahawa keputusan para ulama dalam mengutamakan penjagaan masalahat adalah bertujuan untuk memastikan setiap perbuatan yang disandarkan kepada dalil hukum syarak bukanlah bersifat sia-sia atau membawa kerosakan. Akan tetapi pelaksanaan hukum mengikut kaedah yang tepat akan memberikan natijah kesejahteraan kepada agama, kehidupan, akal, keturunan dan harta benda yang dimiliki insan.

Seperti yang diperjelaskan sebelum ini, kemaslahatan bagi golongan kanak-kanak dalam perkahwinan adalah merupakan perkara utama yang dipertanggungjawabkan oleh hukum syarak ke atas pihak wali khususnya bapa pengantin perempuan. Hal ini adalah kerana jika diteliti, terdapat keistimewaan dan kemaslahatan khusus yang perlu dijaga sebelum melangsungkan perkahwinan yang melibatkan kanak-kanak. Menurut Ibnu Manzur (2005) mendefinisikan istilah *al-Sighar* sebagai golongan kanak-kanak iaitu sebagai sesuatu yang berlawanan dengan maksud dewasa atau tahap umur majoriti. Beliau juga menjelaskan bahawa penggunaan istilah tersebut juga selalunya merujuk kepada maksud suatu sifat atau ciri yang wujud pada diri setiap insan dari awal kelahiran hingga mencapai tahap baligh.

Manakala istilah kanak-kanak adalah bermaksud budak lelaki atau perempuan yang masih kecil dan kebiasaannya belum berumur lebih daripada 7 atau 8 tahun. Golongan remaja pula ditakrifkan sebagai individu yang ke arah dewasa, mencapai tahap akil baligh dan cukup umur untuk berkahwin (Noresah Baharom et al. 2015). Dari sudut pengamalan undang-undang di Malaysia, seksyen 2 (1) Akta Kanak-kanak Pindaan (2016) menjelaskan bahawa istilah kanak-kanak adalah merujuk setiap individu yang berumur di bawah lapan belas tahun. Takrifan ini adalah selari dengan peruntukan di bawah artikel 1 Konvensyen Mengenai Hak Kanak-kanak 1989. Konvensyen tersebut digubal khusus bagi memberikan peringatan dan menegaskan keperluan khusus bagi golongan kanak-kanak serta menghendaki pihak kerajaan agar mengambil tanggungjawab untuk memelihara kesejahteraan kanak-kanak agar hak-hak mereka diiktiraf (Portal Rasmi Jabatan Kebajikan Masyarakat).

Kaedah asas yang menunjukkan betapa Islam memelihara kemaslahatan kanak-kanak yang terlibat dengan perkahwinan di umur ialah dengan mensyaratkan hanya kategori wali mujbir sahaja yang berhak untuk mengahwinkan dan melangsungkan akad pernikahan. Hukum syarak berpandangan bahawa seorang bapa atau datuk yang merupakan wali mujbir dianggap sentiasa mempunyai perasaan penuh rahmat dan kasih sayang terhadap anak gadis yang di bawah tanggungjawabnya. Sudah pasti wali mujbir adalah lebih teliti dan tidak mahukan kerosakan berlaku dalam hidup pengantin perempuan. Hukum syarak juga meletakkan syarat bagi wali mestilah memenuhi syarat baligh dan kesempurnaan akal bagi membolehkan mereka

mempertimbangkan kemaslahatan yang terbaik untuk pengantin perempuan (Rohmat, 2011). Peringatan yang tegas juga diberikan kepada wali supaya mementingkan kemaslahatan kanak-kanak dalam perkahwinan bawah umur, bukan sekadar memikirkan manfaat dan keuntungan yang bakal dinikmati oleh wali atau ahli keluarga yang lain di sebalik perkahwinan berlangsung (al-Khatib, 2002).

Antara aspek-aspek kemaslahatan kanak-kanak yang perlu diberikan perhatian oleh pihak wali ialah:

Pemberian mahar

Mahar dalam perkahwinan adalah merupakan pemberian harta atau sebarang bentuk manfaat oleh suami kepada isterinya atas sebab pernikahan atau berlakunya persetubuhan.¹ Kewajipan mahar dalam Islam mestilah merupakan suatu yang bernilai dan berharga bagi menjamin kebajikan isteri dalam perkahwinan. Para ulama menjelaskan bahawa mahar bukanlah syarat sah atau rukun pernikahan kecuali bagi mazhab Maliki yang meletakkan mahar sebagai salah satu daripada rukun utama. Kewajipan mahar adalah berdasarkan dalil al-Quran:

“Maka isteri-isteri yang telah kamu nikmati (setubuhi) bersama mereka, maka berikanlah maharnya (dengan sempurna) kepada mereka, sebagai suatu kewajipan” (al-Nisa’, 4:24)

Menurut Abdul Karim Zaydan (1993) menjelaskan bahawa kewajipan pemberian mahar adalah hukum yang disepakati oleh fuqaha. Setiap suami dikehendaki oleh syarak untuk menunaikan mahar seperti mana diwajibkan pemberian nafkah kepada isterinya setelah berlaku akad pernikahan yang sah. Mahar yang tidak disempurnakan akan tetap dikira sebagai hutang bagi menzahirkan betapa Islam memelihara kebajikan golongan isteri yang dinikahi. Malah mahar tersebut adalah merupakan hak eksklusif yang dimiliki oleh setiap isteri kerana sekiranya belum ditunaikan oleh suami seperti mana telah dijanjikan, maka isteri mempunyai hak untuk menafikan hak dan tanggungjawab yang perlu ditunaikan dalam perkahwinan termasuklah terhadap suaminya (Sabiq, 2000). Antara yang kelepasan hukum syarak yang diberikan kepada isteri selagi belum menerima pemberian mahar ialah berhak menolak ajakan suami untuk mengadakan hubungan kelamin dan juga tidak diwajibkan untuk melaksanakan tanggungjawab menguruskan hal ehwal rumah tangga yang lain (Mat Saad, 2007).

Begitu juga dalam konteks tanggungjawab wali untuk menjaga kemaslahatan kanak-kanak, maka mestilah dikahwinkan dengan lelaki yang sekufu dan pemberian mahar *mithl* yang bersesuaian. Menurut Zanariah (2013) menjelaskan bahawa sebagai contoh dalam situasi seorang bapa sukar berpeluang untuk mengahwinkan anak perempuannya dengan lelaki yang sekufu dengannya. Maka apabila mendapat peluang untuk mengahwinkan anak gadisnya dengan lelaki sekufu yang dicari, maka diharuskan untuk segera mengahwinkan anak gadis tersebut walau masih belum baligh, dengan syarat mahar yang diberikan hendaklah munasabah dengan keadaan pengantin perempuan bagi menjaga kemaslahatan kanak-kanak. Kepentingan mahar *mithli* dalam perkahwinan kanak-kanak bagi melindungi hak mereka dapat dilihat menerusi pandangan mazhab Hanafi yang mengharuskan selain wali mujbir seperti wali asabah untuk mengahwinkan kanak-kanak dengan syarat sekufu dan menggunakan mahar *mithl*. Sekiranya kedua-dua syarat tersebut tidak dipenuhi dan berlaku kezaliman, maka akad pernikahan tidak sah menurut syarak (al-Jaziri, 1935).

¹ Abdul Karim Zaydan, 1993, *Al-Mufasssal fi Ahkam al-Mar’ah wa al-Bait al-Muslim fi as-Syari’ah al-Islamiyyah*, Beirut: Muassasah al-Risalah

Kesediaan fizikal

Aspek kemaslahatan kanak-kanak yang penting untuk diberikan perhatian oleh pihak wali ialah kesediaan kanak-kanak secara fizikal untuk melakukan persetubuhan setelah menjalinkan ikatan perkahwinan. Hal ini sukar untuk dielakkan kerana dalam situasi perkahwinan normal, suami berhak untuk menuntut layanan batin daripada isteri dan hukum syarak mewajibkan isteri untuk menjalankan tanggungjawab tersebut selagi mana tiada keuzuran dari sudut syarak. Namun bagi keadaan pengantin perempuan yang masih dalam lingkungan umur kanak-kanak, maka terdapat perbincangan dalam kalangan ulama berhubung perkara tersebut. Sememangnya tiada had umur bagi pengantin perempuan dalam perkahwinan kerana kanak-kanak perempuan yang masih belum baligh tetap diharuskan berkahwin sekiranya mendapat persetujuan wali mujbir.

Namun demikian, bagi menjamin kemaslahatan kanak-kanak maka hukum syarak tetap menekankan kesediaan dan kemampuan diri kanak-kanak terutamanya secara fizikal sebagai suatu syarat utama sebelum suami melakukan hubungan kelamin. Malah terdapat segelintir ulama yang berkeras tidak bersetuju dalam mengahwinkan kanak-kanak perempuan yang masih belum baligh. Pandangan mereka adalah bersandarkan kepada golongan kanak-kanak tidak sesuai untuk dibebani dengan sebarang tanggungjawab kerana masih belum baligh. Malah justifikasi yang dinyatakan ialah perkahwinan kanak-kanak adalah bersifat *lagha* iaitu sia-sia kerana dari sudut fitrah mereka tiada kemahuan syahwat untuk hidup berpasangan yang merupakan matlamat bagi ikatan perkahwinan. Maka sebarang bentuk tindakan wali yang bertentangan dengan kemaslahatan dan mendatangkan risiko kemudaratan kepada kanak-kanak adalah dilarang oleh hukum syarak (al-Sarakhsi, 1983).

Oleh demikian, majoriti ulama daripada keempat-empat mazhab yang mengharuskan telah bersepakat menyatakan bahawa kanak-kanak tidak dibolehkan untuk diserahkan kepada suami bagi tujuan persetubuhan selagi mana belum mencapai tahap kesediaan yang meyakinkan. Sememangnya diakui bahawa akad pernikahan menghalalkan persetubuhan, namun bagi kategori kanak-kanak kecil yang dikahwini ketika umur kecil tidak harus diserahkan kepada suami sehingga berkelayakan untuk menjalankan tanggungjawab sebagai isteri dalam konteks persetubuhan (al-Haitami, 1938). Para ulama tidak mewajibkan mencecah tahap baligh, akan tetapi yang terpenting adalah kesediaan untuk hidup bersama secara zahir dan batin. Ini adalah isu utama yang sering kali dibangkitkan adalah hubungan kelamin antara lelaki dewasa dan kanak-kanak yang belum datang haid atau mencapai usia baligh. Secara logiknya, sudah pasti sekiranya persetubuhan berlaku akan menyebabkan kemudaratan dari sudut fizikal dan memberikan tekanan emosi kepada kanak-kanak kerana disetubuhi tanpa kesediaan diri. Malah sekiranya terjadi kehamilan disebabkan persetubuhan, kanak-kanak yang mengandung akan mengalami kemudaratan yang lebih hebat kerana terpaksa menjaga anak dalam kandungan ketika masih berusia kanak-kanak (Zanariah, 2013).

Kemaslahatan kanak-kanak dari sudut kesediaan fizikal wajar diberikan perhatian oleh pihak wali kerana merupakan sebahagian daripada isu kesihatan diri yang terangkum di bawah *Hifzu Nafs* iaitu kewajipan menjaga nyawa bagi manusia. Pandangan ini disokong oleh kajian perubatan yang menunjukkan bahawa perkahwinan kanak-kanak telah menyebabkan timbulnya perasaan tersisih dan depresi yang keterlaluan. Malah isu kesihatan yang pernah dibangkitkan ialah wujud jangkitan penyakit seksual kerana kurangnya kewaspadaan dalam diri kanak-kanak. Di samping itu, kanser serviks juga berpotensi untuk berlaku serta akan mewujudkan risiko ketika melahirkan anak kerana dilahirkan oleh seorang kanak-kanak (Nawal M. Nour, 2009).

Di samping itu, wali juga sewajarnya mendapatkan kepastian berhubung kesediaan kanak-kanak dari sudut fizikal sebelum melangsungkan perkahwinan. Kaedah yang terbaik

ialah dengan mendapatkan pengesahan daripada pengantin perempuan sendiri kerana hubungan kelamin yang dilakukan bersama kanak-kanak yang belum datang haid berpotensi untuk menyebabkan kesakitan dan kemudaratan fizikal, serta tekanan mental dan emosi kanak-kanak. Sungguhpun tidak dinyatakan larangan qat'ie berhubung hubungan kelamin suami dengan isteri yang masih kanak-kanak, akan tetapi mazhab Syafi'e menjelaskan bahawa disunatkan untuk wali mengahwinkan anak gadis setelah mencapai umur baligh, dan disunatkan juga untuk mendapatkan izin kanak-kanak terlebih dahulu memandangkan hubungan kelamin tidak boleh dielakkan setelah termeterai ikatan perkahwinan (al-Nawawi, 2000). Kesemua pandangan ulama tersebut menunjukkan tanggungjawab yang dipikul suami untuk menjaga kemaslahatan kanak-kanak dalam perkahwinan.

Realiti yang berlaku pada zaman kini menunjukkan bahawa keharusan hukum syarak berhubung perkahwinan kanak-kanak sering kali dikaitkan dengan gejala tidak bermoral seperti Pedofilia. Malah berlaku persendaan terhadap perbuatan Rasulullah SAW yang mengahwini Saidatina Aisyah RA ketika umur kecil. Oleh itu, sekiranya aspek kemaslahatan kanak-kanak dari sudut kesediaan fizikal tidak diberikan perhatian dan seterusnya menyebabkan berlakunya kemudaratan pada kanak-kanak, maka akhirnya akan memberikan kesan kepada kesucian hukum syarak. Maka pihak wali seharusnya memainkan peranan utama bagi mengelakkan tohmahan dan persepsi negatif terhadap hukum syarak dengan cara tidak sewenang-wenangnya mengahwinkan kanak-kanak yang masih belum mencecah umur baligh. Malah perbuatan tersebut boleh dielakkan sekiranya wali khususnya bapa mempunyai pengetahuan dan kefahaman terhadap tahap kemampuan sebenar kanak-kanak dari sudut fizikal untuk berkahwin serta memikul beban tanggungjawab yang berat untuk melayani suami (Abur Hamdi et. al, 2019)

Kesempurnaan akal

Selain itu, wali juga bertanggungjawab untuk menjaga kemaslahatan kanak-kanak dari sudut kesempurnaan akal dan tahap pemikiran kanak-kanak. Ini adalah kerana para ulama seperti al-Kasaniy (2000) menegaskan penentuan tahap kesediaan kanak-kanak secara fizikal dari sudut baligh sahaja tidak mencukupi bagi menjamin kemaslahatan yang menyeluruh. Akan tetapi yang terpenting ialah untuk memastikan akal fikiran kanak-kanak mencapai tahap yang sempurna iaitu *rusyid*. Menurut al-Tusiy (1987) menjelaskan bahawa antara syarat utama yang perlu dipenuhi bagi kanak-kanak untuk memikul tanggungjawab sebagai mukalaf ialah berakal dan memahami *khitab* iaitu hukum syarak atau perbuatan ibadah yang dilakukan oleh mereka.

Tidak dinafikan bahawa kematangan akal fikiran manusia adalah perkara yang akan menyusul setelah berlaku kematangan fizikal manusia. Menurut Wafa' (2012) menjelaskan kedua-dua tidak berlaku serentak kerana kebiasaannya kanak-kanak telah baligh dari sudut fizikal terlebih dahulu. Seterusnya perkembangan akal fikiran kanak-kanak ke arah kesempurnaan yang dipanggil sebagai *rusyid* akan berlaku secara perlahan-lahan bergantung kepada diri masing-masing. Antara yang menyumbang kepada kesempurnaan akal fikiran individu ialah pemakanan, persekitaran, cuaca, pendidikan dan pengalaman yang dinikmati oleh setiap kanak-kanak. Setelah kanak-kanak mencapai kesediaan fizikal melalui baligh dan kesempurnaan akal menerusi *rusyid*, maka barulah layak untuk diiktiraf sebagai ahliyyatu al-ada' al-kamilah kerana telah memiliki dua syarat utama iaitu *al-Idrak* (kemampuan untuk memahami) dan *al-Ikhtiar* (kemampuan untuk memilih). Hukum syarak menetapkan bahawa baligh dan *rusyid* mempunyai hubung kait yang rapat dalam memahami perubahan pada diri kanak-kanak terutamanya perempuan. Penjelasan ulama berhubung *rusyid* ialah sebagaimana yang diperintahkan oleh Allah SWT mengenai kaedah pengurusan harta anak yatim;

“Dan ujilah anak-anak yatim itu (sebelum baligh) sehingga mereka cukup umur baligh (dewasa), kemudian jika kamu merasakan mereka telah mempunyai tanda-tanda kecerdikan dan kesempurnaan akal (rusyd) dan berkebolehan menjaga harta mereka sendiri, maka serahkanlah kepada mereka harta yang dimiliki, dan janganlah kamu memakan harta anak yatim itu secara terburu-buru (merebut peluang) sebelum mereka mencapai umur dewasa” (al-Nisa’, 4:6)

Menurut ahli tafsir menjelaskan bahawa ayat tersebut menjelaskan bahawa tahap *rusyd* boleh ditentukan dan diketahui setelah kanak-kanak dinilai setelah mencecah umur baligh. Ini adalah kerana walaupun seorang kanak-kanak telah mencapai tahap baligh seperti yang ditetapkan oleh hukum syarak, akan tetapi tidak semestinya dia berkemampuan untuk berfikir dan membuat keputusan menggunakan akal fikiran yang matang dan sempurna. Oleh yang demikian, majoriti fuqaha’ mengingatkan bahawa penilaian yang dipanggil *al-Ikhtibar* perlu dilakukan terhadap kanak-kanak yang telah mencapai usia baligh (dewasa) supaya dapat menguji kadar kecerdasan akal fikiran dan ketajaman minda anak dalam menentukan sama ada perkara yang dilakukan bakal membawa kebaikan atau kerosakan terhadap dirinya sendiri. Malah para ulama menegaskan bahawa ujian tersebut haruslah dilakukan beberapa kali bagi mendapatkan kesahihan terhadap kesempurnaan akal fikiran kanak-kanak yang telah mencapai usia baligh (al-Zuhailiy, 2008).

Di samping itu, pendapat oleh al-Syirazi menyatakan bahawa istilah *rusyd* memberikan kelayakan kepada kanak-kanak untuk mendirikan pemerintah agamanya dan juga memelihara harta yang dimiliki tanpa sebarang tegahan atau sekatan oleh pihak lain. Malah segala keputusan yang dibuat adalah sah dan tidak perlu memohon kebenaran daripada wali atau penjagaa mereka (al-Syirazi, t.th). Haruslah difahami bahawa penentuan *rusyd* pada diri kanak-kanak memerlukan penelitian oleh setiap wali kerana memberi kesan kepada pelepasan hak dan kuasa yang dimiliki oleh wali tersebut terhadap diri kanak-kanak. Begitu juga dalam konteks perkahwinan yang melibatkan kanak-kanak, maka wali mengambil pendekatan yang efisien untuk menilai dan menguji kesempurnaan akal kanak-kanak sebelum bersetuju untuk mengahwinkan mereka

Oleh yang demikian, bagi menjamin kemaslahatan kanak-kanak maka setiap wali mestilah menguji tahap kesempurnaan akal fikiran kanak-kanak bagi memastikan kanak-kanak tersebut menepati ciri *rusyd* yang diperjelaskan oleh hukum syarak sebagai *al-Solah fi al-Mal wa al-Din* (kesempurnaan pada penjagaan harta yang dimiliki dan pemeliharaan agama). (al-Qurtubi, 1996). Wali mestilah berkeyakinan bahawa kanak-kanak telah melepasi tahap *rusyd* dan mempunyai kecerdasan akal yang mencukupi dalam membuat keputusan berhubung perbuatan yang mampu memberikan mereka kemaslahatan dan menolak kemudaratan sebelum membenarkan kanak-kanak untuk melakukan keputusan sendiri.

Kesimpulan

Secara keseluruhannya, dapatlah disimpulkan bahawa hanya kategori wali mujbir sahaja yang diberikan hak menurut hukum syarak untuk mengahwinkan kanak-kanak walau tanpa persetujuan kanak-kanak tersebut. Malah terdapat syarat dan situasi tertentu sahaja yang membolehkan wali mujbir memaksa pengantin perempuan untuk berkahwin. Akan tetapi hukum syarak menetapkan wali tidak boleh sewenang-wenangnya mengikat kanak-kanak dengan perkahwinan yang diyakini memberikan kemudaratan pada diri mereka. Ini adalah

kerana wali bertanggungjawab sepenuhnya dari sudut hukum syarak untuk menjaga kemaslahatan kanak-kanak perempuan yang diletakkan di bawah tanggungannya. Terdapat beberapa aspek *dharuriyyah* berhubung kemaslahatan kanak-kanak yang wajib dipelihara dan diberikan penekanan oleh wali sebelum melangsungkan ikatan perkahwinan kanak-kanak.

Malah tidak dinafikan walaupun wali memiliki autoriti untuk mengahwinkan kanak-kanak, akan tetapi dari sudut siyasah syariyyah di bawah pengamalan undang-undang Islam, pihak qadi yang dilantik oleh pemerintah berhak untuk menilai perkahwinan kanak-kanak yang ingin dimeterai oleh wali. Kebenaran qadi dalam kes perkahwinan kanak-kanak adalah diperlukan bagi memastikan kepentingan dan kebajikan kanak-kanak terus dipelihara dan tidak sesekali dizalimi oleh arahan wali yang memberikan kemudahan pada diri kanak-kanak tersebut.

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Venue: Langkawi, Malaysia

Website: <https://submit.confbay.com/conf/icmasit2> @ <http://icmasit2021.egax.org/>

Email: icmasitofficial@gmail.com; conference2@egax.org



**4th International Conference on Tourism, Technology and Business Management 2021
(4th ICTTBM 2021)**

Date: 1-2 August 2021

Venue: Kota Bharu, Kelantan, Malaysia

Website: <https://submit.confbay.com/conf/icttbm4> @ <http://icttbm2021.egax.org/>

Email: icttbmofficial@gmail.com; conference2@egax.org



**4th International Research Conference on Humanities, Social Sciences and Technology 2021
(4th IRCHST 2021)**

Date: 21-22 August 2021

Venue: Kuala Lumpur, Malaysia

Website: <https://submit.confbay.com/conf/irchst4> @ <http://irchst2021.egax.org/>

Email: irchstofficial@gmail.com; conference2@egax.org



2nd International Conference on Innovation Approaches in Business, Education and Technology (2nd ICIABET 2021)

Date: 18-19 September 2021

Venue: Cameron Highland, Malaysia

Website: <https://submit.confbay.com/conf/iciabet2> @ <http://iciabet2021.egax.org/>

Email: iciabetofficial@gmail.com; conference2@egax.org



3rd Penang International Multidisciplinary Conference 2021 (3rd PIMC 2021)

Date: 25-26 September 2021

Venue: Penang, Malaysia

Website: <https://submit.confbay.com/conf/pimc3> @ <http://3pimc2021.egax.org/>

Email: pimcconferences@gmail.com; conference2@egax.org



**6th International Conference on Social Sciences, Humanities and Technology 2021
(6th ICSHT 2021)**

Date: 23-24 October 2021

Venue: Sabah, Malaysia

Website: <https://submit.confbay.com/conf/icsht6> @ <http://icsht2021.egax.org/>

Email: icshtofficial@gmail.com; conference2@egax.org



4th Langkawi International Multidisciplinary Conference 2021 (4th LIMC 2021)

Date: 20-21 November 2021

Venue: Langkawi, Malaysia

Website: <https://submit.confbay.com/conf/limc4> @ <http://4limc2021.egax.org/>

Email: limcconf2019@gmail.com; conference2@egax.org



4th IRCMST 2021

4th International Research Conference on Multidisciplinary in Social Sciences and Technology (4th IRCMST 2021)

Date: 27-28 November 2021

Venue: Kuala Lumpur, Malaysia

Website: <https://submit.confbay.com/conf/ircmst4> @ <http://4ircmst2021.egax.org/>

Email: ircmstofficial@gmail.com; conference2@egax.org



5th IRCHST 2021

5th International Research Conference On Humanities, Social Sciences and Technology (5th IRCHST 2021)

Date: 11-12 December 2021

Venue: Kota Bharu, Kelantan, Malaysia

Website: <https://submit.confbay.com/conf/irchst5> @ <http://5irchst2021.egax.org/>

Email: irchstofficial@gmail.com; conference2@egax.org



3rd IRCASE 2021

3rd International Research Conference on Applied Sciences and Engineering 2021 (3rd IRCASE 2021)

Date: 11-12 December 2021

Venue: Kota Bharu, Kelantan, Malaysia

Website: <https://submit.confbay.com/conf/ircase3> @ <http://3ircase2021.egax.org/>

Email: ircaseofficial@gmail.com; conference2@egax.org



5th ICIEL 2021

5th International Conference on Islamic, Education and Law 2021 (5th ICIEL 2021)

Date: 18-19 December 2021

Venue: Ipoh, Perak, Malaysia

Website: <https://submit.confbay.com/conf/iciel5> @ <http://iciel2021.egax.org/>

Email: icielofficial@gmail.com; conference2@egax.org



**International Virtual Conference on Social Sciences, Engineering and Technology 2021
(IVCoSET 2021)**

Date: 8 September 2021

Venue: Online

Website: <https://submit.confbay.com/conf/ivcoset2021> @ <http://ivcoset2021.egax.org/>

Email: ivcosetofficial@gmail.com; conference2@egax.org



**International Virtual Conference on Engineering, Innovation and Social Sciences 2021
(IVCEIS 2021)**

Date: 2 December 2021

Venue: Online

Website: <https://submit.confbay.com/conf/ivceis2021> @ <http://ivceis2021.egax.org/>

Email: ivceisofficial@gmail.com; conference2@egax.org



**International Virtual Conference on Social Sciences, Education and Innovation 2021
(IVCoSEI 2021)**

Date: 14 June 2021

Venue: Online

Website: <https://submit.confbay.com/conf/ivcosei2021> @ <http://ivcosei2021.egax.org/>

Email: ivcoseiofficial@gmail.com; conference2@egax.org

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