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CONSUMER PERCEPTION TOWARDS REAL ESTATE ONLINE MARKETING

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Abstract: *Today's internet usage is no longer limited as a networking media, but it is also being used as a main way of transaction for consumers at global market. The usage of internet was grown rapidly over the past years and it has become a major ways for delivery and trading information, services and goods. Therefore, the objectives of this study are to investigate the perception of people in buying real estate by using online medium marketing as well as to identify the key factors in influencing consumer decision towards marketing medium in online shopping for real estate product. This study adopted quantitative research approach in answering research objectives. The findings were based on the 320 set of questionnaires distributed to the respondents within Batu Pahat town area, and subsequently was analysed by using SPSS software. From the results, majority of the respondents were satisfied about the awareness of using online medium marketing due to the security, usefulness, ease of use, and privacy. moreover, the results had identified six factors in influencing consumer decision towards online marketing namely; Confidentiality of Information, Experiences from forum groups, reliability information, Experiences from peers, saving time and convenience. Hopefully this research will help the sellers, marketers and researcher in improve visibility and reach a much bigger customer base hence it will improve profits by manipulating the available opportunities and also adding knowledge in marketing strategies.*

Keywords: *Consumer perception, Marketing, Consumer purchase decision, Real estate*

Introduction

Today's internet usage is no longer limited as a networking media, but it is also being used as a main way of transaction for consumers at global market. The usage of Internet was grown rapidly over the past years and it has become a major ways for delivery and trading information, services and goods (Albarq, 2006). The research by Johnson (2005) determined the online shopping is becoming increasingly popular. Online retail sales are estimated to grow from RM172 billion in 2005 to RM329 billion in 2010. The development of the internet has risen up the number of online shopping activities (Hill and Beatty, 2011). From the research carried out by International Data corporation (IDC) Asia Pacific indicates that the future forecast in Malaysia looks bright and promising (Louis and Leon, 1999).

Consumers' previous experiences with online purchases had a significant influence of levels of risks perception by consumers and their purchasing decisions (Dillon, 2004). But if there are negative experiences had occur it increased the level of risk perception with online

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shopping plus can make it more difficult for other online businesses to gain initial customers (Boyer, 2005). Plus, it has been reported if that the consumers has a low perception and trust of online merchants, making them unwilling to make purchases online. Belanger, Hiller & Smith, (2002) stated that the results of a survey of 9700 online consumers showed that three out of five respondents did not trust web merchants. This result showed that the online property marketing carried out crucial role in attracting the online user to grow the businesses. In addition, consumer attitude is also an issue that concerns many researchers (Darley,et al., 2010).

Therefore, the objectives of this study are to investigate the perception of people in buying real estate by using online medium marketing as well as to identify the key factors in influencing consumer decision towards marketing medium in online shopping for real estate product.

Literature Review

Marketing

Marketing were defined as human activity tailored to meet the needs and wants through an exchange process (Kotler et al., 2009). Marketing is also an entire system of business activities that start the process of planning, pricing, promoting and distributing goods and services to satisfy the needs of buyers and responding to potential buyers (Stanton et al., 1994).

Mahruzar (1991) stated that, in order to achieve profitability in the business hence the need for the so-called marketing activities. Marketing is an activity that includes; knowing the needs and desires of the market; converts needs and desires into products and services; and creating and expanding demand for these products.

Purpose of Marketing

There are three main objectives of marketing, namely for notification or which to inform other people about the presence of the products or services. Details explanation as presented in Table 1 below.

Table 1: Purpose of Marketing

Purpose of Marketing	Explanation
To inform	To inform people about the presence of the products/services and to inform the market to price changes that occur, explaining how a product will work, describe the type of services that are provided, and disseminate information
To promote	and also is in line to make products as consumer choice and encourage consumers to change brands of products now marketed product.
To remind	To remind people of the importance and benefits of these products have in the future. This warning is also given as information that could leave the impression in the minds of consumers against interest (Kotler et al., 2009).

Concept and Methods of Marketing

Based on market development strategy, a business organization or business unit worked relentlessly to achieve greater market groups from existing to market the latest products. All parties such as manufacturers, distributors and users participated with marketing medium to achieve the goals of both sides.

Generally, there are two types of current marketing concepts that traditional marketing concepts and modern marketing concept. The concept of traditional marketing starts from the initial orientation based on production and sales. While the concept of modern marketing involves marketing relationships with customers, market your business or industry markets with the aim to utilize the community. As an example of modern marketing is like the Internet or generally called e-commerce (e-marketing), search engine, marketing, internet marketing and many others. This method is also targeting users with more accurate and sometimes called marketing individual (one-to-one marketing).

Internet Marketing

Marketing through the Internet can be defined as the process of building and maintaining relationships between customers through activities through the Internet to facilitate the exchange of ideas, products and services to meet the needs of buyers and sellers. It can form a marketing strategy in the real estate business, which provides products and services. Marketing in general is often considered more difficult and complex because of the existing problems that have been created by the characteristics of the unique services (Osmadi, 2004).

Based on studies conducted by Osmadi (2004), proved that by adding applications such as e-services can solve many problems in traditional marketing services is by giving them control over all services provided to customers. Given the convenience and efficiency of the Internet as a source of information, customers who recognize their property information in the website are more likely to find this information (Littlefield, Bao, and Don, 2000)

The main purpose of advertising is done is to meet the five (5) main objectives for marketing, communication, education, economic and social. Advertising on the Internet is a business model in which advertising activities conducted virtually. It aims to promote goods to the target group, especially to potential customers when establishing communication between companies and customers (Littlefield, Bao, and Don, 2000).

Consumer Purchase Decision

Theoretically, the consumer purchase decision can be schemed into eight functions are as follows;

Experiences from peers and friends

The social influence comes from the reference groups. For the online consumers reference groups are identified as virtual communities, consisting of discussion groups on a web site. Other people experiences, opinions have shown in this medium and affect consumers (Kau, Tang & Ghose, 2003). Another one are contact links, web site links related to the product or the service, which make individuals ensure about the decision. According to Kotler and Armstrong (2010) the effects of the Reference Groups are mainly based on the belief that a person's behavior is influenced by many small groups. Family is one of this reference groups. There are different ways that reference groups influence an individual's attitude, they may expose a new behavior or life style or may create a pressure to accept the attitude.

Convenience

Copeland (1923) said that convenience as easy to purchase at the accessible stores. Same goes with marketing if the consumers are familiar with the goods it is usually affecting the consumer to purchase the goods as marketing medium makes it convenience as compared buying them at the stores. Plus, Holton (1958) said that convenience goods as those consumer goods which the consumer usually purchases frequently, immediately, and with a minimum of effort. Shopping and specialty goods entailed a more concerted and cognitive effort on the

part of the consumer. Other than that, research one by Holton (1958) said that the consumer will consider a good a convenience based upon their perception of the "probable gain from making price and quality comparisons among alternative sellers." Interestingly, Holton suggested that nonworking wives would perceive more goods as shopping goods, while working wives would perceive more as convenience goods due to their greater opportunity cost of time. This shows that online marketing are really convenience as it can be access anywhere and anytime by the consumer and helpful a lot to the working people.

Saving time

Through its operationalization in recent research, there online marketing overwhelmingly implied to be equivalent to time saving or time buying. The theoretical framework for this new and restricted definition lies primarily in the economic concept of the household as production unit. Michael and Becker (1973) expanded the classic economic consumer choice behavior model to include time. The classic model describes purchase behavior as a utility function in which the consuming unit attempts to maximize utility subject to constraints of income and relative prices of goods. In order to account for variations of demands (other than by the traditional economic catch-all of tastes), Michael and Becker suggest that the household produces basic commodities through the productive activity of combining purchased market goods and services with the household's own time. The household's "full income" then is composed of monetary income and total available time. Income and time constrain the production capabilities of the household.

Ease of use and usefulness of information

There is literature that has demonstrated that perceived ease of use directly and positively influences behavioral intention to use and also influences intentions indirectly through perceived usefulness (Agarwal and Prasad, 1999). In the e-services, the researchers had found out the findings which demonstrate the positive relationship between perceived usefulness, perceived ease of use and intention to use (Wang and Tang, 2003).

Reliability of information

These factors increase confidence during the transaction and helped in reducing awkwardness, complexity and uncertainty, and increase confidence in the abilities of the other person. Since customers who trust are more likely to make an online purchase, the importance of trust as a key facilitator of electronic commerce is increasingly being recognized in academic and practitioner communities (Flavia’n and Guinaliu, 2006). Hence, it makes it as one of the factor influencing consumer decision as people are trust with the reliability of the information.

Real Estate

The property (real estate) refers to a commodity or type of property, a field of study, an occupation or business activity of any physical form. The property is the most fundamental resource in the world. It provides space for social and economic activities of man. The property is very closely related to our life as compared to other commodities. Therefore, it is often the object of study and analysis (Dasso & Ring, 1989).

The property is also a piece of land that includes what is above, below ground and any building or structure on it. It can include businesses or businesses on the property and can usually be transferred (Investorword, 2011). The property also refers to a piece of land or property consisting of land and all the elements that are on the ground including buildings, plants or minerals. It should also be distinguished from one personal item (Collins, 2009). For

the purposes of the National Land Code 1965 (Act 56/1965), "land" has been defined under Section 5 as:

The surface of the earth and all things to the earth's surface.

The earth beneath the surface of the earth and everything in it.

All plants and other natural products, whether or not requiring the use of workers regularly for its production, and either above or below the earth's surface.

All things attached to the earth or permanently fastened to anything attached to the earth, either above or below the earth's surface.

The land covered by water.

Research Methodology

This research adopted quantitative research approach along the research process. The results were based on the data collected through the 320 questionnaires distributed within case study area. The parties involved are made up of professional workers and administrative in the Universiti Tun Hussein Onn Malaysia. The results of this questionnaire is to address two objectives which are to investigate the perception of people in buying property using online medium marketing and to identify key factors in influencing consumer decision towards marketing medium in online shopping for real estate product. Finally, only 200 questionnaires were returned, accounted for 62.5 percent respond rate.

Results and Discussion

Respondent profile

From the 320 questionnaires were distributed to the various respondents, only 200 questionnaires were returned, accounted for 62.5 percent respond rate. The Table 2 below summarises the profile of the respondents involved in this research.

Table 2: Respondents profile

No.	Respondent Profile	Frequencies (n=200)	Percentage (%)
1	**Gender:**		
	- Male	82	41%
	- Female	118	59%
2	**Age:**		
	- Under 21	9	4.5%
	- 21-30	62	31%
	- 31-40	68	34%
	- 41-50	44	22%
	- 51 and over	17	8.5%

3	**Occupation:**		
	- Proffesional Workers	132	66%
	(Lecturer/Tutor)	53	26.5%
	- Administrative Staff	15	7.5%
	- Engineer/Assistant Engineer		
4	**Educational Level:**		
	- Secondary Level	9	4.5%
	- Diploma	18	9%
	- Bachelor's Degree	39	19.5%
	- Master's Degree	94	47%
	- PhD's Degree	40	20%
5	**Monthly Income:**		
	- < RM 2,000	22	11%
	- RM 2,001- RM 3,000	26	13%
	- RM3,001- RM 4,000	38	19%
	- RM 4001- RM 5,000	54	27%
	- > RM 5,000	60	30%

The Perception of People in Buying Property Using Online Medium Marketing

From the results, majority of the respondents are familiar with the online marketing, and in terms of using online marketing to review the real estate products, nearly half of the respondents are eager to get know about the property marketing.

On the other hand, majority of the respondents were satisfied that buying property by using online medium of marketing are significant in terms of their security *(mean=2.70*), usefulness *(mean=2.22)*, privacy *(mean=3.20)*, and ease to use *(mean=2.30)*. This results is similar with the previous studies indicated the attitude of individual towards the use of particular technology can be influenced by the perceived usefulness and perceived ease of use (Davis, 1989), as well as security and privacy (Shih, 2004).

Factors Influencing Consumer Decision towards Buying Property Using Online Marketing

From the results, there were six factors identified influencing consumer decision towards buying property using online marketing namely; experiences from peers, experiences from forum group, saving time, convenience, reliable information, and confidentiality of information. From the results, convenience shows the highest mean score, which mean majority of the respondents were strongly agreed that online marketing are really useful as it can be access everywhere and anytime.

Moreover, some of the respondents referred to the forum groups before using any online marketing medium as there were lots of discussion and real experiences of the

members through the forum groups. According to Kotler and Armstrong (2007) the effects of the reference groups are mainly based on the belief that a person's behaviour is influenced by many small groups, and including families group. There are different ways that reference groups influence an individual's attitude, they may expose a new behaviour or life style or may create a pressure to accept the attitude.

Next, respondents were also agreed that the usage of online medium marketing is really saving up their time plus it is very convenience as it can be access everywhere. This really helped the respondents in viewing the property before deciding to go to the actual site later. Other than that, the most of the marketing websites are user friendly hence it makes the users understand easily on how to use the website.

Lastly, some of the respondents feel assured about the information given by the websites. It may be some websites provided the accurate details about the products. Based on the previous studies, the social influence comes from the reference groups. For the online consumers reference groups are identified as virtual communities, consisting of discussion groups on a web site. Other people's experiences, opinions have shown in this medium and affect consumers (Kau, Tang & Ghose, 2003). Another one are contact links, web site links related to the product or the service, which make individuals ensure about the decision.

Conclusion

This research aims to investigate the perception of people in buying property using online medium marketing, as well as to identify key factors in influencing consumer decision towards online shopping for real estate. Overall, the analysis of the findings through the questionnaire had shown that perceptions of respondents can be known from the perceived of security, privacy, ease of use and also usefulness. From the result, most of the respondents are aware of those perceptions above. Other than that, the majority of the respondents agreed with the factors influencing the consumer decision which was the experiences of peers, forum groups, saving time, confidentiality of information, reliable information and convenience were highly influenced the respondents. Hopefully, these results will provide some idea to the future real estate investor to invest in property by using online medium of marketing.

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EXPLORING ONLINE ENTREPRENEURIAL READINESS AMONG YOUNGSTER

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Abstract: *Entrepreneurship is the willingness to engage into entrepreneurial behaviour in the future. Entrepreneurship intention may be affected by different factors. The purpose of this study is to investigate the factors that may influence to the readiness of youngster to be global via online entrepreneurship. This study has come out with three factor which the independent variable; Innovation Ideas, Adoption of Smartphones, and Personal Challenges. The population for this study is 174,900 of young adult in Melaka between 18 to 35 years old and the researcher use purposive sampling method to be used as the respondent. The Questionnaire was given to 179 young adult. Out of 179, only 175 were returned and 4 have not been accepted. After the collection of data, a code was developed for each variable before being transferred to the computer for analysis. In this study, the researcher will use the Statistical Package for Social Sciences (SPSS) as the study statistics software to analyse data that has been collected. To be added, few statistical tools will be used in this study such as Reliability Analysis, Frequency Analysis, Descriptive Analysis and Multiple Regressions. The result of this research have enabled researcher to achieve research objectives. The data have been analysed using Pearson's Correlation and Regression analysis. Pearson's Correlation analysis has indicated that all three variables; Innovation Ideas, Adoption of Smartphones and Personal Challenges has good strength of association to the dependent variable (Online Entrepreneurship).*

Keywords: *Online Entrepreneurship, Innovative Ideas, Adoption of Smartphones, Personel Challenges, Youngster*

Introduction

An increasing difficulty to get the job among fresh-graduate or young generation has attract some of these group to open up new business via online through massive way in the internet such as Instagram, Facebook, Carrousell, and many more (Fallon N., 2017). These kinds of social media have met up between buyer and seller easily. Those varieties of social media are offering two-ways communication and make it easier for buyer to surf and search what type of product that they are looking for. Bank Negara Malaysia (BNM) reported that youth unemployment has been on the rise in the country, estimated to have reached 10.7% in 2015, over three times the national unemployment rate of 3.1%, as growth in hiring has slowed since late 2014. Among of this group, young graduates has made relatively large percentage share of jobless youth with 23%. Also, referring from the report by BNM, youth unemployment rise faster of 1.2% percentage point in 2015 to 10.7%, differ to the estimated of 9.5% in 2014. Nowadays, world faced sophistication and advancement of technology

through smartphones and tablets. There are plenty of devices that had totally changed the usage of mobile phone or tablet. Generally, with this kind of advancement, people will using mobile phone as the initial transaction of their business (Judith Aquino, 2010) This factor has influence the usage of those devices especially among young generation (below 35 years old). Government has identified entrepreneurship is a new approach that may contribute to economic wealth. This proved by implementation of many policies and programs by government in a way to increase entrepreneur among Malaysian. Employment opportunity also may raise cause of entrepreneurial activity and also increase competitiveness among entrepreneur in a market place. Unemployment and economic growth has become a major economic crisis faced by most countries (Reinhart and Rogoff, 2009). Entrepreneurship is one of the ways to tackle these economic problems. According to Rahman and Nafeez Fatima (2011), entrepreneurship also may help in generating or increase economic growth of a nation, and this has attract many researcher to study the relationship between economic growth and entrepreneurial activities. It also been stated by Hafer (2013), that the rising number of level entrepreneurial activity could contribute to the increase in economic growth. As the result, government reinforce calls for changing the policy to promote productive entrepreneurship. Generally, entrepreneurship has been viewed for giving benefits in the economic perspective. Thus, this is the main reason has attract interest of the researcher to study the relationship that could influence the increasing number of young generation in entrepreneurial activity. Thus, researcher have list several factors that could influence increasing number of entrepreneur among young generation; innovative idea, usage of smart phones and tablets, and personal challenges.

Literature Review

Entrepreneurship

It is difficult to have specific definition of entrepreneurship despite the amount of research has been taken in this field (Kobia, Margaret; Sikaleh Damary, 2010). According to Gartner (1990), what brings the difference between entrepreneur and non-entrepreneur is that; entrepreneurs create the organization. But it is argued by Carland (2002), he said, there is no literature exactly define entrepreneur. But the most important thing is entrepreneurship can be explained as the individual that put his or her effort to make the improvement towards; either existing product or new product. The action taken by the entrepreneur transforming their idea into ended product or services distinguish from other common business people. Entrepreneur has different level upwards compared to business people. An entrepreneur always comes with new creative and innovative ideas and makes an improvement on existing product. Entrepreneur also always trying to grab all the opportunities before other competitors realize it (Bygrave and Hofer, 1991). The benefits that bring by entrepreneurship is not limited only in the side of competition among them, it also give an impact towards economic development of a nation (Rahman and Nafeez Fatima, 2011). It would also offer employment opportunity to the community. Generally, entrepreneur is the best role model in creating wealth and job opportunities (Keat, Selvarajah, & Meyer, 2011). People nowadays are changing the nature of work that suggests young people to go for entrepreneurial activity (Roger and Martyn, 1999). They also found, increasing number of entrepreneurship among this generation due to lack of identifiable role models, and lack of encouragement from important career influencer; such as teacher and career guidance specialists on career choice. But, early research found factors that may influence small-business start-ups. Those factors are the need for achievement (McClelland, 1961), risk-taking prospensity (Brockhaus, 1980), locus of control (Brockhaus, 1982), tolerance of ambiguity (Schere, 1982), and desire for personal control (Greenberger

and Sexton, 1988) have been discovered and tested as possible traits associated with entrepreneurial behavior. There are also numbers of other background factors relates to individual behavior that may lead to intention for start-ups business or entrepreneurial activity; previous employment (Storey, 1982; Ronstadt, 1988), family background (Scott Twomey, 1988; Matthews and Moser, 1995), gender (Buttner and Rosen, 1989), education background (Storey, 1982), ethnic membership (Aldrich, 1980), and religion (Weber, 1930). According to Mazzarol, Volery, Doss and Thein (1999), those factors combine with psychological traits will make some individuals more "entrepreneur" than others. Government in Malaysia are always encouraging entrepreneurship in Malaysia, especially among young generation. According Hafer (2013), through entrepreneurship, it is also may help to increase national income (GDP). One of the initiative made by Malaysian government through Malaysia External Trade Development Corporation also known as MATRADE and Malaysian Association of ASEAN Young Entrepreneurs (MAAYE) - is ASEAN Young Entrepreneurs Carnival 2016. The collaboration between these two associations is the first public-private sector initiative for young entrepreneurs. This event supported by Ministry of International Trade and Industry and ASEAN Young Entrepreneurs Council. Upon the ceremony, two Memorandum of Understandings (MoUs) were endorsed. The first MoU is Incubator Programme for ASEAN Export Champions. It's aim is to make young entrepreneurs rise in state-level and first-time state-level exporters into successful traders. The initiative focused on developing entrepreneurs who are e-Commerce-ready, utilizing digital platforms as the method to market access, creating a business ecosystem that is driven by innovation and technology. This programme also puts strong on better understanding of branding, packaging, marketing, and media relations in which these indicate to export process. Second MoU is the "Gabungan Usahawan Parlimen Jeli untuk Program Jaguh Eksport ASEAN" involved MAAYE and Jeli-based entrepreneurs. This MoU is to pay tribute for the participation of entrepreneurs in Jeli, Kelantan as the initial project for the Incubator Programme for ASEAN Export Champions (Cultivating youth entrepreneurship, 2016). It can be conclude that from initiative made by public and private sector, Malaysian government is dedicated in encouraging entrepreneurship along with digital sophistication nowadays. World nowadays are facing internet revolution where almost young and adult categories of ages using internet in their daily life and kids are not left behind. Physical store are slowly adapting online services (Rigby, 2011) to capture this revolution of business environment. Internet has made the entrepreneur to capture this opportunity in their marketing strategy (Mort, 2003) . Internet make world border-less (Colon-Fung, 2007). Push the traditional business (physical store) into electronic commerce or 'e-commerce'.

Innovative Ideas

Innovation can be the critical part in small-medium enterprise (SMEs) for their business survival because innovation is the key element of an organization to use their knowledge, skills, and experience to the development of new technologies, products of their business (McAdam, McConvery and Armstrong, 2004). Innovation helps SMEs to sustain in the market, creating competitive advantage for their business (Economic and Social Council, 2012). What brings the difference between entrepreneur and businessman is the innovation (Wagener, Gorgievski, and Rijsdijk, 2008). Entrepreneurs always come with new idea in order to capture opportunity, compared to the normal business owners who have less strategic goals. According to Amabile (1988), it is impossible to survive the business without innovative and creative thinking. An innovative idea is the basis element of creative. Amabile also defined innovation as 'organizational innovation is the successful implementation of

creative ideas within an organization'. This can be explaining that ideas can be in any form of subject such as new product, processes, or procedure in organization itself. Generally, innovation is the development and implementation of the new ideas. According to Drucker in his article on 1985, innovation rise from the opportunity and successful entrepreneurs did not have specific personality in common but the systematic practice of innovation. A study has found that entrepreneurship and innovation has relationship and has interaction to help particular organization to success. According to Fang Zhao (2005), entrepreneurship and innovation is complementary. In which, to become a good entrepreneur you need to be an innovative person. Also, it is important element of a success organization that need these two; entrepreneur and innovation to sustain in nowadays dynamic and changing environment.

Adoption of Smartphones

Smartphones has become world phenomenon. It is hard to find people nowadays without at least a mobile phone; either smart-phone or even basic mobile phone. The Pew Research Center's Internet & American Life on their research regarding smartphone adoption found that, two from five mobile phone owner own a smartphone as of May 2011. CNBC reported on 16 Nov 2016, India has experienced big increasing number of entrepreneurship. This rising number was aligning with the increasing number of smartphone adoption among entrepreneurship. Presently, smartphone user now can install any program or application that can fit into their needs (Smith & Salvendry, 2011). This features has brings smartphone to the great advancement. Smartphone also can be connected to PC, other mobile devices, internet using wireless network such as USB, Bluetooth, WiFi and others and make smartphone most useful mobile device.

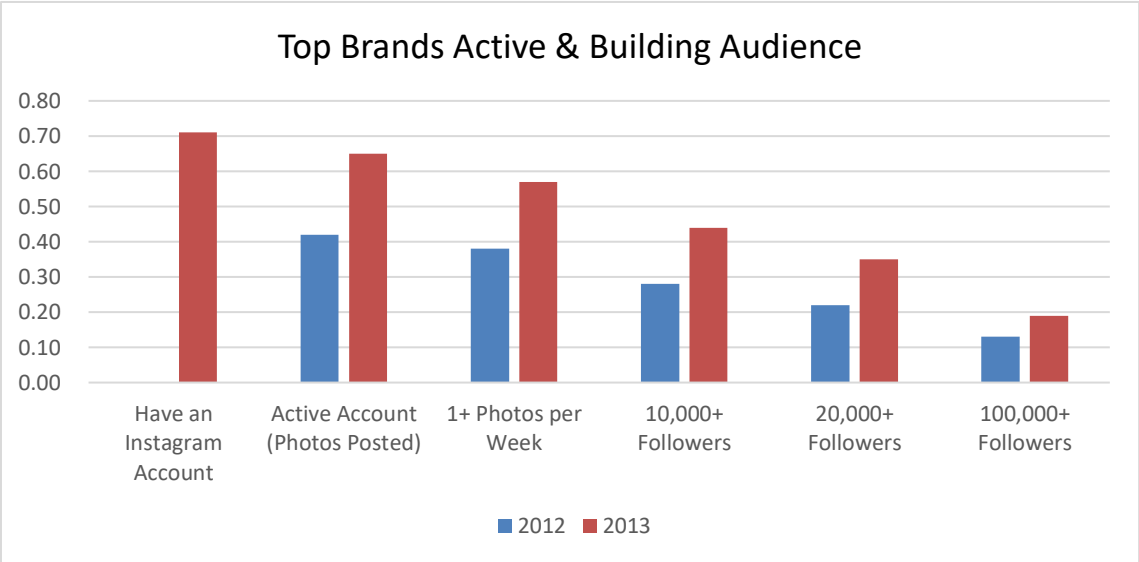

Figure 1: Top Brands Active and Building Audience for the Third Quarter of 2012 and 2013

Based on Figure 1, as increasing activity made by the top brands marketers, so do followers. Steve (2013), stated from the article reviewed, automotive, media and luxury brands dominate the online market. Automotive industry such as Mercedes-Benz, BMW and Audi are among the top most engaging brands. Hash-tags (#) have become the norms among social media users. 83 percent of Instagram post includes at least one hash-tag (Pew Research Center, 2016). Another fun fact, photos posted received more "like" than videos. These phenomenon set by world due to Instagram is the fastest-growing among top social network. The simple

gesture made by Instagram such as "double-tap" like the post and ability of scrolling through the feeds of friend, celebrity and top-brands have made this activity near effortless.

Personal Challenges

Unemployment affected by the downsizing and decreasing number of employment in the industry. According to Department of Statistics Malaysia, Labor Force Participation Rate (LFPR), the number of labour force down for 0.4 percent in September 2016. Meanwhile, the employed person decrease to 14,249,600 in September 2006 while in August was 14,306,900 people were employed. This shows the increasing number of unemployment in Malaysia as in 2016. Personal challenges in this scope of study can be explained by the desire of an individual in creating wealth. Those challenges will lead to entrepreneurial intention. According to Firdaus (2017), entrepreneurial intention can be defined as the desires of an individual to start business or an organization. Generally, entrepreneurial intention described as the action taken by the individual towards the result to catch the opportunities. According to Mai Ngoc Khuong (2016), human mind are controlled by psychological process in thinking of entrepreneurs expectation and business goal for future outcomes. That intention has been proved as the best predictor to entrepreneurial behavior. Entrepreneurial intention is one of the strategy in avoiding unemployment as well as important development tools (Yaghmaei, 2015). Mai Ngoc Khuong (2016) also has identified motivation factors affect entrepreneurial intention. According to Rita Remeikiene (2013), need for achievement is one of the indicators show whether a person is entrepreneur orientation or not. This factor also identified as the determinants of outcomes such as career success, school grades, and firm performance (Altinay L., 2012). A person who has high need for achievement likely has the most desires to success. According to Urve Venesaar (2006), personal characteristics and behavioral typical of an entrepreneur are correlated positively with the intention to start the business in the near future, which means start early then in the future plan. Also in her study shows that some of the respondent are considering their intention to start-up the business but in the distant future rather than after graduation. The interesting part in her study is the students' status, specialty and degree of study has connections to the entrepreneurial intention.

Finding

Based on the table 1, it is indicates the reliability of the variables based on Cronbach's Alpha and the strength of associations of each variables. N of item refers to the number of questions that been questioned in the set of questionnaire distributed. Based on the table 1, Personal Challenges shows the highest Cronbach's Alpha with 0.853, followed by Innovation Ideas which is 0.835, and Adoption of Smartphones with 0.687. Meanwhile, the lowest value is Entrepreneurship factor with value of cronbach alpha 0.6827 is acceptable. It can be concluded that Innovation Ideas and Personal Challenges variables has strong reliability where these two variables have Cronbach's Alpha value more than 0.80. Adoption of smartphone has moderate reliability where it is more than 0.60 and the least value is Entrepreneur which has acceptable reliability.

Table 1: Reliability Analysis for each Variable

FACTORS	NUMBER OF QUESTION (S)	CRONBACH' S APLHA	STRENGTH
Innovation Ideas	8	0.835	Good
Adoption of Smartphone	7	0.687	Acceptable
Personal Challenges	6	0.853	Good
Entrepreneurship	5	0.682	Acceptable

Table 2 shows the correlation between each variable. The first correlation is to examine the association between Entrepreneurship and Personal Challenges. The result show that the correlation is (r = 0.602, p = 0.00). Therefore, it is strong relationship between Entrepreneurship and Personal Challenges. Second, correlation is to study the association between Entrepreneurship and Innovation Ideas. The result show that the correlation is (r = 0.526, p = 0.00). Thus, there is strong relationship between Entrepreneurship and Innovation Ideas. The third correlation is to study the association between Entrepreneur and Adoption of Smartphones. The result show that the correlation is (r = 0.429, p = 0.00). Thus, there is moderate relationship between Entrepreneurship and Adoption of Smartphones. These findings shown that all independent variables; Innovation Ideas, Adoption of Smartphones, and Personal Challenges have a significant relationship and correlated with dependent variable (Entrepreneurship).

Table 2: Pearson's Correlation Summary

VARIABLES	R	STRENGTH OF ASSOCIATION
Entrepreneurship and Personal Challenges	.602	Strong
Entrepreneurship and Innovation Ideas	.526	Strong
Entrepreneurship and Adoption of Smartphones	.429	Moderate

Table 3 shows the result Multiple Regression analysis for this research. It is indicates that all three variables has significant relationship between independent variables and dependent variable.

Table 3: Multiple Regression Analysis

Model	Standardized Coefficients	t	Sig
	Beta		
(Constant)		-1.848	.066
Innovation Ideas	.401	6.709	.000
Adoption of Smartphones	.222	3.200	.002
Personal Challenges	.324	4.359	.000

Conclusions

The result indicates that all three independent variables have positive correlation towards the dependent variable. The aim of this study is to determine the factors influencing to the intention of online entrepreneurship among youngster in Melaka. The result demonstrates that all three variables have significant relationship between independent variables and dependent variables. Innovative Ideas has significant relationship with Online Entrepreneurship. The study conducted has shown the result of Innovative Ideas has good strength correlation towards Online Entrepreneurship. This indicates that Innovative Ideas were correlated in good strength towards dependent variable which is Online Entrepreneurship. From the questionnaire survey conducted by the researcher, the respondent does believe that they could become an entrepreneur if they have good and innovative ideas. Typically, entrepreneur will produce either make an improvement from existed product or create new product. Adoption of Smartphones and Entrepreneurship has shown moderate association between variables. The acceptance of the rising technology from smartphones has brings these group of youngster to adopt e-business by using online application or social media. Based on the survey conducted, the respondent believes e-business using online application or social media will enhances the effectiveness of business. This due to, by using social media or online application, it will facilitate both sides; entrepreneur and also consumer or customer. This is because, online application has provided medium to communicate through direct messages. For example, Instagram has become one of the social media that entrepreneurs used to sell their product by posting the images into their account. This allowed consumers to survey on their product and directly get the information from entrepreneur or seller through “Direct Message”. They also agreed that social media could reduce the costs of business operation. This due to entrepreneur did not need to find a premise to run the business. Meanwhile, Personal Challenges has good strength correlation towards Online Entrepreneurship. Based on survey conducted, they do believe they may broaden their personal development from the entrepreneurial activity.

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DIRECTORS REMUNERATION AND FIRM VALUE OF MALAYSIAN LISTED FIRMS

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Abstract: *Directors remuneration has attracted considerable interest among the scholars and the financial analyst as it seen to be a main reason of good firm performance. This paper sought to examines the director's remuneration and the firm value in Malaysia. The data and the materials were collected from the Bursa Malaysia website and the Eikon Thomson Reuters. Data of the director remuneration, CEO duality and board size were obtained from the annual report where the other variable such as the firm value, firm size, leverage were collected from the Eikon Thomson Reuters database. The samples of this paper using 602 firms from different industries from 2014 to 2016 period. Regression analysis shows that non-cash directors remuneration has stronger significant positive relationship with firm value rather than cash remuneration. It proves that the remunerations received by directors can motivate them to perform better for the firm. The analysis also shows board size and firm age positive significantly related with the firm value. Further, the potential limitation of using firm value as the only dependent variable may not provide more meaningful insight of the impact of other components of the performance measure such as excess in value, growth and other performance measure. Thus future study may use these variables for future study.*

Keyword*: Cash remuneration, Non cash remuneration, Director, Firm Value*

Introduction

The debate on the Directors remuneration among the people nowadays has been the main subject. It has taken a major stage in discussion on the issue of corporate governance. The argument for the higher level of remuneration that received by the directors is that it will attract a higher caliber of candidate which, in turn, will result in increased business performance (Patel and Simon, 2014). From the previous study by Raithatha and Komera, (2016) they have find that there is positive relationship between director remuneration and the firm performance. But, this understanding on director's remuneration cannot be use for the long period and jump into solid conclusion.

Stated in Malaysian Code on Corporate Governance (MCCG), Malaysian companies need to make a specific disclosure on the level of remuneration paid to directors. But, in Malaysia, most of the Malaysian companies hide the detail of the director's remuneration even though it was the best practices that are recommended by the MCCG (Yeong, 2011) .Since there are lot of companies that not prepared to disclose the detail of the

director's remuneration, it will give disadvantages to the shareholders of the company to make an informed decision when voting on the approval of directors remuneration. It also can limit the understanding of the shareholders towards the relationship between the level of directors pay and firm performance.

Previous researches active in explaining director remuneration by using an agency theory, managerial power approach and efficiency wages theory. Since directors provide decision making, they typically better informed about firm as compared to shareholders. Hence, a potential issue of interest arises due to the partition of ownership and managerial control. The relationship between the directors remuneration and firm value might have the positive relationship. And this proclamation was supported based on the prior study by (Diks, 2016), they have find that there is positive relationship between director remuneration and firm value.

Even though prior study found that there is positive relation between directors remuneration and firms value, most of the previous research is using different sample period which is in the past, most firms would have problem or issues in maintaining their performance for a period of times. This paper is trying to find the recent relationship between the director's remuneration and the firm performance (firm value).

Literature review

Agency theory

Agency theory is a management theory that explained the relationships and self-interest in business organizations. The main idea of the agency theory is that one party delegates work to a second party which known as agent. It explains how best to organize relationships in which one party (principal) determines the work and which another party (agent) performs or makes decisions on behalf of the principal (Jensen & Meckling, 1976)

Since the shareholders of the firm (principal) not involve with the firm, it can cause the misalignment between the principle and agents (directors). If the conflict arises between the agent and principle it can cause poor result in firm value. The most reason the problem arise between principle and agent is when they have different interest towards company (Hill & Jones, 1992). Agency theory also helps the firm in develop the director remuneration package. The firms need to provide a remuneration package that can attract and motivate the directors, so they can have focused more on the firm performance. But, firms need to avoid pay more than is necessary or in other words overpay.

Agency cost happen when the failure of the agents which hired by the principals of a business to fully comply with the terms and responsibilities stipulated in their contract. It suggests that the directors should be rewarded based on their performance to avoid agency cost. Agency cost may arise because of the company executive may act in their own interest. For an example, they may raise their own salaries to an unrealistic level.

Studies on relationship between remuneration and firm value

Directors remuneration is closely related with the firm value as one of the financial performance. To increase firm value, firms need to provide the directors with high remuneration package to motivate them (Patel and Simon, 2014). The amount of the remuneration package that paid to directors should capable enough to attract and retain the good directors. The relationship between the director's remuneration and the firm values is positively related based on the previous study. According to Miyienda, Oirere, and Miyogo (2013), study that conduct by them found that there is positive relation between the directors remuneration and the firm performance. They also found that there is strong relationship

between director's remuneration and the earnings after tax. But, in relation between the return on asset and firm value, they found there is weak relation with director's remuneration.

Meanwhile, in Malaysia prior study also prove the positive relationship between director's remuneration and firm performance. Based on Haron and Akhtaruddin (2013), the study held by them on the 120 companies in Bursa Malaysia find positive relationship between firm performance such as firm value and directors remuneration. This study can be a strong evidence to support the positive relationship between directors remuneration and the firm performance. But, even though the sample used by them were high which involving 120 companies in Bursa Malaysia, the data collected by them only involving one-year period which is on 2005. And result reported may not be strong enough to make solid conclusion. In other prior studies by (Talha, Sallehhuddin, Salim, & Masoud, 2009), they also found positive relationship between total director remuneration paid and firm performance.

On the other hand, Usman (2010) found statically insignificant negative relationship between chief executive officer (CEO) compensation and firms performance. The study that conducted using data 2004-2008 cannot prove the evidence that CEO compensation positively related with the firm's value. Even though the study cannot prove the positive relation, the study found that the larger the firms the higher remuneration package paid to the CEO. The researcher concluded that the firms' size positively related to the firm performance and larger boards do not necessarily mean greater remuneration package to the directors. Raithatha and Komera (2016) examined the relationship between executive compensation and firm's performance. The study conducted using the sample of 3,100 firms in India. The study conducted is over the period of 2002-2012. They concluded that, the remuneration paid to the directors had positive relation with the firm performance.

Methodology

Research design, sample description and data collection

The only one dependent variable is the firm value and two independent variables which is cash and non-cash directors remuneration followed by five control variables which are CEO duality, board size, firm age, firm size and leverage. This type of research is in the form of quantitative study and the model that been used to test the relationship between directors remuneration and firm value is Regression Model analysis. For this paper, it was based on the secondary information. All data and materials were collected from the Bursa Malaysia website and the Eikon DataStream. Data such as directors remuneration, CEO duality and board size were obtained from the annual report whereas the other variable such as the firm value, firm size, leverage were collected from the Eikon Thomson Reuters database. The sample for this study involved 602 different firms from Malaysia over 3-years period which is from year 2014 to 2016.

Regression model

The model used to test the hypotheses is as follow:

Functional form:

FV= f (Cash and non-cash directors remuneration, board size, CEO duality, firm size, firm age, leverage)

Hence our function can be estimated under the following model:

$$FIRM_VALUE_{it} = \alpha + \beta_1 CASH_REM_{it} + \beta_2 CASH_REM_{it} + \beta_3 BOARD_SIZE_{it} + \beta_4 CEO_DUA_{it} + \beta_5 FIRM_SIZE_{it} + \beta_6 FIRM_AGE_{it} + \beta_7 LEV_{it} + \epsilon_{it}$$

Variables Definition

Dependent variable

FIRM_VALUE = Firm Value

Independent variable

$CASH_REM_{it}$ = Directors remuneration in term of cash

$NONCASH_REM_{it}$ = Directors remuneration not in term of cash

Control variable

$BOARD_SIZE_{it}$ = the firm's board size

CEO_DUA_{it} = the firm's CEO duality

$FIRM_SIZE_{it}$ = the firm's size

$FIRM_AGE_{it}$ = the firm's age

LEV_{it} = the firm leverage

i = company

t = time

Result and Discussion

Descriptive Statistics

An analysis of the table 1 shows that the mean of the firm value for the sample companies is 1.352313 and varies from 0.001935 (minimum) to 140.5347 (maximum). The standard deviation is 6.049396. Firm value of this study is calculated by divided market capitalization to total assets. For the independent variable which is director cash (CASH_REM) and non-cash remuneration (NONCASH_REM) were transformed into the natural logarithm. The mean for cash remuneration is 6.302943 and varies from 3.903090 (minimum) to 9.052682 (maximum). The standard deviation is 0.438145. For non-cash remuneration, the mean is 4.802277 with range between 3.100371 (minimum) to 7.335961 (maximum). The standard deviation for non-cash remunerations is 0.577454.

For control variables, the board size (BOARD_SIZE) was calculated by the number of the directors in the company. The mean for the board size is 7.416714 or around 7 to 8 people and varies from 3.00 people (minimum) to 22.0 (maximum) people. The standard deviation is 2.044210. The next control variable is firm age (FIRM_AGE) which calculated by current years minus the incorporations date. The mean for firm age is 30.45378 years and the range is from 0.00 year (minimum) to 188.00 years (maximum). The standard deviation is 19.46741.

For firm size (FIRM_SIZE) which calculated by transform the value of the total asset to the natural logarithm, the mean is 8.473817 and has the range between 5.094310 (minimum) to 10.82412 (maximum).

The standard deviation for firm size is 0.711310. For CEO duality which is the dummy variable, the mean is 0.2271. It means that CEO duality from the sample is around 22.71% that CEO also holds the position of the chairman of the board. Range of CEO duality in this study is from minimum value 0 to maximum value 1. The standard deviation is 0.419122. The last variable is the leverage. It was calculated by the total liabilities divided by the total asset of the firm. The mean for leverage is 47.6%2 and the range is between 0.002444% (minimum) to 78.03287% (maximum).

Table 1: Descriptive Analysis

Variable	Mean	Std. Dev.	Min	Max	Observations
FIRM_VALUE	1.352313	6.049396	0.001935	140.5347	N = 1611
CASH_REM	6.302943	0.438145	3.903090	9.052682	N = 1764
NONCASH_REM	4.802277	0.577454	3.100371	7.335961	N = 778
BOARD_SIZE	7.416714	2.044210	3.000000	22.00000	N = 1771
FIRM_AGE	30.45378	19.46741	0.000000	188.0000	N = 1774
FIRM_SIZE	8.473817	0.711310	5.094310	10.82412	N = 1774
CEO_DUAL	0.227170	0.419122	0.000000	1.000000	N = 1774
LEV	0.476182	2.437412	0.002444	78.03287	N = 1773

Pearson Correlation

Based on the table 2, it has shown the summarization of the correlation between the variables. The director cash remuneration (CASH_REM), non-cash remuneration (NONCASH_REM), board size (BOARD_SIZE), firm age (FIRM_AGE) and firm size (FIRM_SIZE) has significant positive correlation with the firm value. There are also variables that have negative effect with the firm value which is CEO duality (CEO_DUAL) and leverage (LEV).

The first independent variable which is CASH_REM has significant positive relationship director remuneration (NONCASH_REM) at 1% level of significant. Control variables such as BOARD_SIZE, FIRM_AGE, FIRM_SIZE and LEV have significant positive relationship with second independent variable which is CASH_REM. Most of the relationships are significant at 1%. NONCASH_REM has positive relationship with BOARD_SIZE, FIRM_AGE, FIRM_SIZE at 1% significant level.

In relation to relationship among control variables, BOARD_SIZE is significant positive relationship with FIRM_AGE and FIRM_SIZE at 1%. Second control variable is FIRM_AGE is significant positive relationship with FIRM_SIZE and CEO_DUAL at 1%. There is no relationship appear between FIRM_SIZE and CEO_DUAL or FIRM_SIZE and CEO_DUAL. Lastly, CEO_DUAL has positive relationship with LEV at 1%.

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Table 2: Pearson Correlation Coefficient

		FIRM_VALUE	CASH_REM	NON_CASH	BOARD_SIZE	FIRM_AGE	FIRM_SIZE	CEO_DUAL	LEV
FIRM_VALUE	Pearson	1							
	Sig.								
CASH_REM	Pearson	.063*	1						
	Sig.	.012							
NONCASH_REM	Pearson	.177**	.304**	1			.		
	Sig.	.000	.000						
BOARD_SIZE	Pearson	.008	.267**	.247**	1				
	Sig.	.743	.000	.000					
FIRM_AGE	Pearson	.126**	.051*	.175**	.099**	1			
	Sig.	.000	.030	.000	.000				
FIRM_SIZE	Pearson	.057*	.322**	.290**	.309**	.170**	1		
	Sig.	.021	.000	.000	.000	.000			
CEO_DUAL	Pearson	-.010	.027	-.006	.022	.084**	-.018	1	
	Sig.	.700	.258	.869	.350	.000	.451		
LEV	Pearson	-.006	.072**	.042	.006	.019	-.019	.071**	1

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Sig.	.820	.002	.238	.801	.422	.423	.003	

*. Correlation is significant at the 0.05 level (2-tailed) and **. Correlation is significant at the 0.01 level (2-tailed).

4.3. Multiple Regression Analysis

Table 3: The Coefficient of Multiple Regression Analysis

Dependent Variable: FIRM_VALUE

Method: Panel Least Squares

Date: 05/05/18 Time: 21:43

Sample: 2014 2016

Periods included: 3

Cross-sections included: 348

Total panel (unbalanced) observations: 723

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-20.94179	5.399904	-3.878178	0.0001
CASH_REM	2.171764	0.951298	2.282949	0.0227
NONCASH_REM	1.856297	0.617764	3.004864	0.0027
BOARD_SIZE	-0.382960	0.160170	-2.390967	0.0171
FIRM_AGE	0.079295	0.015223	5.208731	0.0000
FIRM_SIZE	0.037497	0.512785	0.073125	0.9417
CEO_DUAL	-1.091301	0.744810	-1.465207	0.1433
LEV	-0.055105	0.082881	-0.664871	0.5063

R-squared	0.076942	Mean dependent var	1.714795
Adjusted R-squared	0.067905	S.D. dependent var	8.529665
S.E. of regression	8.234972	Akaike info criterion	7.065660
Sum squared resid	48487.56	Schwarz criterion	7.116376
Log likelihood	-2546.236	Hannan-Quinn criter.	7.085236
F-statistic	8.514115	Durbin-Watson stat	0.138839
Prob(F-statistic)	0.000000		

From the table 3, the coefficient of the directors cash remuneration (CASH_REM) is 2.1718 with the t-statistic 2.2830. The non-cash director remuneration (NONCASH_REM) has coefficient 1.8563 and the t statistic is 3.0049. The p value for director cash remuneration is

0.0227 and the non-cash remuneration is 0.0027. Its means that the directors cash remuneration is significant at 5% level and the non-cash remuneration significant at 1% level. This result proves that the total remuneration package that paid to the directors plays the main role in increasing firm value because the total remuneration received by the directors can motivate them to perform better in the firms. It also helps the firm to secure and retaining good caliber director for a firm to have a good performance align with the firm value. The past research also explained that the higher the remuneration pay to directors, on average, leads to higher the firm performance (Diks, 2016). Study by Raithatha and Komera (2016) also suggest that the total remuneration packages received by the director can increase the firm performance.

Negative relationship appears between board size (BOARD_SIZE) and the firm value. The coefficient of the board size is -0.3840 and the t-statistic is -2.3910. The p value of the board size is 0.0171. It means that the board size is significant at 5% level. Previous study also found negative relationship between board size and firm performance. Sheikh and Khan (2016) proved that, the smaller boards are more effective than bigger boards because bigger boards may become the cause of delays in decisions making which in turn negatively influence the firm performance. Deschênes, Bouaziz, et al., (2014) and Nguyen, Rahman et al., (2015) also found that there is negative relationship between board size and firm value.

In this study shown that the firm age (FIRM_AGE) has positive relationship with the firm value. The firm age coefficient is 0.0793 and the t-statistic is 5.2087. The p value of the firm age is 0.0000. It means that the firm age is positively related with the firm value at 1% level of significant. This result is align with the past study where the researchers claim that the older firm can be more profitable compared to younger firm due to the experience and efficiency (Hopenhayn, 1992). Besides that, Leite and Carvalhal (2016) conclude that the older firms have better governance practices due to inherent natural maturity that reduce the agency problems. However, based on the past research, there are also researchers that argue and claimed that the young firm performs better than the older firm. This is because the older firms have a problem of rigidity over time which causes to the slow growth and lead to decrease in Research and development (R&D) activities.

There is a positive effect between the firm size (FIRM_SIZE) and the firm value. The coefficient of the firm size is 0.0375 and the t-statistic is 0.0731. The p value of the firm size is 0.9417. Its means that the firm size is not significant relationship with the firm value. The positive relationship between the firm size and the firm value were aligning with the prior study (Firth, Lohne et al., 1996) where found that, the larger firm will have a more complicated operation structure and environment compare to small firm. If the environment faces by top management are uncertain or ambiguous, the compensation or remuneration are likely going to be higher because of the complexity and firms need to find the skillful and professional employees to run the company operation. Besides that, the research conduct by Haron and Akhtaruddin (2013) also proves positive relationship between firm size and firm values. They found the larger the firm size, the more lucrative will be the remuneration package that drawn for directors. This will affect their motivation in increasing the firm performance.

The CEO duality (CEO_DUAL) has a negative effect with the firm value. The coefficient is -1.0913 and the t-statistic is -1.4652. The p value for CEO duality is 0.1433 which means that it was insignificant. CEO duality enables the CEO of the firms to gain full control in dominating the decision making of the firms. By holding two main positions in the company, CEO may have a strong access over the board of directors in shaping his own compensation. It is not consistent with prior study that found positive relationship between

CEO duality and firm value. Elloumi & Gueyie (2001) has claimed that, the greater the power of the CEO in the firms may lead them to have higher remuneration package. And the remuneration package itself will motivate the CEO to perform better in the firms.

Lastly, leverage (LEV) has negative relationship with the firm value. The coefficient for the leverage is -0.0551 and the t-statistic is -0.6649. The p value of the leverage is 0.5063 which means it is not significant. This result shown is not consistent with the prior study (Sheikh & Khan, 2016) where they find the positive relationship between the leverage and the firm value. Jensen (1986) claimed that the debt can be an effective tool to mitigate the agency problems between managers and shareholders. When the agency problem within the firm is less, it will increase the productivity of the firms and automatically increasing the firm value. It also supported by other previous study (Sheikh & Khan, 2016) when they find positive relationship between the leverage and the firm value.

Conclusion and Implication of the Study

From the results, the directors remuneration which are cash and non-cash remuneration is positively relationship with the firm value. The higher the remuneration package receive by the directors can motivate the directors in increasing the firm value.

The board size has negative relationship with the firm value. It shown that the bigger the size of the board, the less effective performance they will be. This is because of the communication barriers in the board of directors since it involves higher number of directors, Next variable is the firm age, it has positive related with the firm value. This result has proven that the older firm will increasing the firm performance since they have more experience and resources compare to younger firms. This is due to the fact that they already stay in the industry for a long time. Besides that, the result also has shown the firm size negative relationship with the firm value. The last variable is the leverage, it shown that the leverage is negatively related with the firm value. High level of debt will increase the risk to the firms. Therefore, leverage has a negative impact on firm value.

From this research, the directors remuneration is positive related to the firm value. From that, it may help the shareholder of the firm to understand the reason behind the total remuneration packages receive by directors. It's important for shareholder because some of them try to discover whether the directors are under or overpay on the company they invest. Next, this paper also may help the investor in making the decision in term of the investment. Since this paper finds that the directors remuneration packages are positive significantly related with firm value, it may help the investor in choosing the company to invest. Investor can make decision by comparing the total remunerations that receive by directors in the firm. From the result itself shown that the higher total remuneration package can increase the firm value. This paper also can help investor since it providing the latest information on director's remuneration.

The last one is the regulator. This paper also may provide the guidelines to the regulator as well. As the result from this paper, there is some variable that positive significantly related with the firm value. So, the regulator such as Bursa Malaysia needs to enforce the rules in term of the disclosure of the important information. They need to make sure that the firms providing the total remuneration package receive by the directors so that the stakeholder can use the information. It is because, in conducting this research, we found that there are some company that not providing the information on the directors remuneration package.

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CORPORATE SOCIAL RESPONSIBILITY PRACTICES AMONG DOT ACCREDITED HOTEL ESTABLISHMENTS IN CALABARZON REGION

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Abstract: *This study aimed to assess the CSR practices of the DOT Accredited hotel establishments in CALABARZON region. More specifically, the study sought answer to the following objectives: present the profile of the hotel industry in CALABARZON in terms of: classification of the accommodation; location accessibility; and number of years of operations; identify the practices of the accommodation establishment in terms of environmental effort, philanthropical effort, social engagement and ethical labor practices. Furthermore, the study tested the difference on the CSR practices when grouped according to the hotel profile. With total of one hundred thirty (130) respondents from the forty-five (45) hotel establishment the result shows that the hotel, resorts and tourist inn have higher level of corporate social responsibility practices primarily in the environment related efforts. Also, results show that there no significant difference exists on the practices of Corporate Social Responsibility when grouped according to location, number of years in operation however, there is a significant difference exists on the practices of corporate social responsibility in terms of environment when grouped according to classification of the hotel establishment. As an output, action plan is being recommended for continuous improvement and innovations.*

Keywords: *Commitment; Corporate Social Responsibility; Hotel; Innovations; Practices*

Introduction

Commitment is the attitude to work really hard to achieve a certain goal. Being committed for continuous improvement would demand full effort, allotting time and even may require sacrifice. Given the fact that commitment is crucial to any business, Corporate Social Responsibility is also essential because it is the heart and soul and is an important standard of modern corporations. It is an indispensable mechanism for both increased corporate accountability, profitability and environmental sustainability. Moreover, 2017 is commemorated as the year of Corporate Social Responsibility (Cone Communications CSR Study, 2017). However, there are emerging issues and challenges on low commitment of the hospitality industry, more specifically the hotels and resorts, when it comes to CSR hence, these issues are the major problems that this study would like to address. In the Philippine law, CSR is being mandated. In compliance to Section 3 of House bill 306 commonly known as Corporate Code of the Philippines, wherein all the business establishments are encouraged and required to implement, participate and support any CSR initiative in the operation of the business may it be in public or private organization.

Over a thousand of books and journals, there are no specific given meaning of CSR, thus Corporate Social Responsibility defines depending on the core value and mission of each business. According to study, the development of corporate social responsibility consciousness is an outcome of the changing of the consumers' ways of thinking (Chai, Chang, Wang & Bre, 2015). The practices may pertain to the environmental effort of a business, philanthropical practices, social engagement and ethical labor practices. Over the previous decades, CSR has been an essential part of the innovative research for most of the academe and industry practitioners (Aguinis & Glavas, 2012).

This study is made to assess the consciousness and awareness in the CSR of hotel establishments. Being the fast-growing hospitality industry, they must also be the first one to have the passion and a heart in helping and reaching out for the community and to the environment making it as part of their commitment. For the hotel industry, measuring the effort they put on promoting tourism shall be equal to their effort in giving back to the community. With this study, the researcher would like to assess the CSR of hotel and resorts and to propose an action plan for continuous improvement in CALABARZON region. Thus, demonstrating a strong commitment from the top management creates power to lead the people in developing the sense of social responsibility for the community.

Literature Review

Corporate Social Responsibility in terms of environmental aspects are progressively vital to the hotel industry, which makes Green hotel enter in the business of hospitality industry (Barber, 2014). Moreover, as UNWTO has come up with this sustainable development goals, one of the key indicator is relating to the environment where environmental protection, conservation and awareness is now the priority of the international hospitality and tourism industry to resolve the emerging global issues such as global warming and climate change. According to Ham and Han, (2013) the hospitality industry should consider the environmental impact; likewise, it is essential for the management to inculcate and observe environmental practices as emerging social cause. This could be made possible by inserting the concern of the local community by creating awareness program and rehabilitation.

Table 1 presents the profile of the hotel establishment. The table reveals that majority of the respondents coming from hotel establishment followed by resorts that are in Batangas followed by Cavite and established for 6-10 years of operation. CALABARZON region is well-known to be a region full of cultural and natural attraction, where a lot of hotel and resort is being enjoyed by tourist locally and internationally. Hotel establishments around CALABARZON are mostly located around coastal area that exist for less than 20 years providing accommodation and luxury to tourist away from home.

Table 1: Profile of the Hotel Establishment

Classification of the Hotel	f	%
Hotel	65	50.0
Resort	48	36.9
Tourist Inn	17	13.1
Location accessibility		
Cavite	35	26.9
Laguna	9	6.9
Batangas	65	50.0
Rizal	10	7.7

Quezon	11	8.5
Number of years of operations		
1-5 years	23	17.7
6 – 10 years	48	36.9
11 – 15 years	24	18.5
16- 20 years	28	21.5
21 years and above	7	5.4

Table 2: CSR Practices in terms of Environmental effort

Indicators	WM	VI	R
1. Comply with or surpass set environmental laws, rules and regulations t promote environmental protection and minimize	3.63	A	1
2.Hotel product is environmentally friendly, creating energy efficier product	3.42	O	6
3. Ensuring environmental sustainability, ecological balance, protection c flora and fauna, animal welfare, agroforestry, conservation of natura resources and maintaining quality of soil, air and water	3.43	O	5
4. The Hotel is one in conserving energy and water resources	3.45	O	4
5. The Hotel promote in the recycling efforts	3.45	O	3
6. The Hotel uses natural plants as interior design.	3.49	O	2
Composite Mean	**3.48**	**O**	

Scale: 3.50-4.00: Always (practiced daily); 2.50-3.49: Often (practiced quarterly); 1.50-2.49: Sometimes (practiced annually); 1.00-1.49: Never (never practiced)

Table 2 presents the CSR practices in terms of Environmental Effort. The computed composite mean score of 3.48 implies that the employees have positive response on the CSR practice in terms of Environmental aspect. The respondents agree that the hotel complies with the environmental laws and regulation that support in protecting the environment (3.63) and the hotel has natural plants as their interior design (3.49). Moreover, the respondents believe that the hotel practices recycling efforts (3.45) and conserving energy and water resources (3.45) However, the hotel product is environmentally friendly (3.42) obtained the least weighted mean score.

Complying with the environmental laws to promote environmental protection ranks first in CSR practices in terms of environmental aspect. One of the environmental law is the Republic Act 903 of 2000 commonly known as the Ecological Solid Waste Management. The recent disclosure in Boracay for rehabilitation and giving the island a break for six months is an effect of the improper waste management. The respondents affirm that the hotel establishment in CALABARZON is complying with the environmental issue, making that in the first rank. This only proves that hotel management manages very well and must continue with the Corporate Social Responsibility goal which leads to environmental protection. Hotels are the most vulnerable industry to climate change because of their fixed assets (Su, Hall and Ozanne, 2013). Climate change is one of the global issue that everyone should be aware of. In a fast-growing industry like hotel and resorts, abiding the environmental rules and regulation is very essential as in the recent study, Ettinger, Grabner-Krauter and Terlutter (2018) highlighted that hotel strongly communicated supplier and environmental issues. The community-based efforts is essential to make it possible to create a full sustenance of the idea to a shared disaster planning led by the community (Orchiston, 2013). There should be a

collaborative effort among the community and the hotel chains with regards to environment so that the corporate social responsibility would be successful.

Hotel product is environmentally friendly, creating energy efficient product ranked last in terms of environmental aspect. Hotel main product is the service provided by the employees. These are indispensable and intangible product that is an essential part of the guest over-all experience. Looking into the environmental friendly product of the hotel, it is important to consider these room amenities that have atmosphere where in the guest would feel like at home and near to nature. However, it is quite challenging on the part of the hotel establishments since it would demand a large amount of investment in creating an environmentally friendly, creating energy efficient product, though the return on investment would be as high since it would save a lot of energy cost and would save Mother Earth as a solution to the emerging concern on global warming. Fewer hotels used pen rather, than recycled paper as part of the complimentary features in the side table. The core of the hotel product is the guest room itself, providing accommodation to the guest. It is essential to consider energy efficient product.

Table 3: CSR Practices in terms of Philanthropical effort

Indicators	WM	VI	R
1. Hotel give more back to the community that can benefit the local community programs.	3.32	O	1
2. Hotel practice CSR by donating to national and local charity.	3.17	O	4
3. The Hotel assist people in acquiring marketable skills to reduce poverty	3.31	O	2
4. The Hotel has a foundation to assist in learning or education for the public	3.21	O	3
5. Employees attend fundraising events that help nonprofit organization	3.10	O	5
Composite Mean	**3.22**	**O**	

Scale: 3.50-4.00: Always (practiced daily); 2.50-3.49: Often (practiced quarterly); 1.50-2.49: Sometimes (practiced annually); 1.00-1.49: Never (never practiced)

Table 3 indicates the CSR practices in terms of Philanthropical Aspect. The computed composite mean score of 3.22 implies that the employees have positive response on the environmentally friendly, creating energy efficient product practice of hotel establishments in terms of philanthropical aspect.

The respondents confirmed that the hotel has local community programs to give back to the community which ranks first in terms of philanthropical aspect. Giving back to community what is due to them is essential for CSR goal. For any hospitality industry who is in the service industry, it is but important to also serve the community where the hotel is located. Most especially for the resort business, most of the services offered are in respect with nature, thus not only for the community but also giving nurture to the nature is very important. As what Schuyt (2013) expressed, in this modern age, there is an option for hotels to also upgrade and create a modernized philanthropical commitment which involves funding to local community, volunteering to a charitable program or in a church service. This is a hotel Corporate Social Responsibility towards philanthropy after years of separation from wellbeing nation debating between the role and responsibilities of government and the market, a renewed focus on philanthropy has shown that many societies also harbor a growing voluntary hospitality sector**.**

On the other hand, employees attend fundraising events that help non-profit organization obtained the least weighted mean score of 3.10. One hotel shares their CSR activity which was started last 2016, the employees of the hotel are the one who organize the annual concert for a Cause. This concert is a fundraising effort of the hotel employees to raise fund to be able to build up the community. They invited artist and bands, recently they were able to raise fund to build a hall for the church nearby. The hotel employees were inspired to make it an annual event of the hotel. This CSR initiatives are really towards working hand in hand to support community aspirations and seeing them through reality is the essence of a meaningful public service. Aside from assisting the community' needs, this simple CSR also provides self-fulfilment and boost the confidence and re affirming of the hotel employees that it feels and it is good to be of help and be used as an instrument to make other people's life better and making a difference with a simple act of random kindness, that is CSR.

Table 4: CSR Practices in terms of Social Engagement

Indicators	WM	VI	R
1. Hotel has a project to improve the management and access of water used by a farming community, to foster public health	3.14	O	2
2. The Hotel inform local communities of mining plans and programs through continuous dialogue to promote awareness of safety and environmental policies.	2.94	O	5
3. The Hotel has a program volunteering in community service and charity.	3.08	O	4
4. The Hotel supports in giving resources for the victims of calamity within the area.	3.20	O	1
5.Employee volunteerism hits inside the home as well by participating in various food programs	3.12	O	3
Composite Mean	**3.10**	**O**	

Scale: 3.50-4.00: Always (practiced daily); 2.50-3.49: Often (practiced quarterly); 1.50-2.49: Sometimes (practiced annually); 1.00-1.49: Never (never practiced)

Table 4 indicates the CSR practices in terms of social aspect. The computed composite mean score of 3.10 implies that the employees have positive response on the CSR practice in terms of social aspect. First in the ranking, the respondents affirm that the hotel provide generously for the victim of calamity (3.20). Philippines, as a developed country would not hide the fact that this country cannot run away from natural disaster. In fact, Philippine is as third most disaster risk country in the world. Numerous typhoon, earthquake and other natural occurrence cause thousand and millions of damages to human and even infrastructure. As one of the manager in Quezon confirmed the most tragic typhoon that they experienced was Typhoon Glenda last 2014. As reported by Regional Disaster Risk Reduction and Management Council (RDRRMC), there were 43 casualties, majority of these was from Quezon province. As part of the Corporate Social Responsibility initiative by one of the resort in Quezon, the management, together with the entire employees helped out in giving out donations for the victims of the tragic typhoon. Furthermore, according to Galindo, Villanueva & Enguito (2014) the country is moderately ready and prepared for these natural disasters. However, knowing the kind of infrastructure such as facilities, utilities and transportation within, the nation is less prepared. For the hotel industry, generous giving to victims is number one priority in their CSR activity. Being the first in rank in Social engagement, it is evident that people working in the hotel industry are good hearted, and

people oriented (Prince& Khaleq, 2013). Moreover, according to Johansson et.al, (2014) affirms that in the occurrence of natural disaster, the hotel and resort is generous in donating to the victims nearby their location.

Finally, lowest in the obtained weighted mean is to promote awareness of safety and environmental policies by having a dialogue to inform the local communities of mining plans and programs (2.94). This issue in mining, safety and environmental policies is being prioritized by the Department of Environment and Natural Resources. The hotel, specifically those located nearby the mining sites in elevated areas are greatly affected by this issue, the more that they are merely concerned in creating awareness and creating program to lessen the massive problem about the issue. Being this as the lowest in the ranking only shows that the hotel industry should consider informing their local community and address the main concern as part of their CSR goals.

Table 5: CSR Ethical Labor practices effort

Indicators	WM	VI	R
1. **Developing an employee bonus program that awards workers who figure out how to make the company's goods even more sustainable.**	3.22	O	7
2. **Employees are formally trained by the Management.**	3.27	O	5
3. **The code of ethics is clearly communicated to employees.**	3.38	O	1.5
4. **The Hotel is more transparent about their business.**	3.31	O	4
5. **Top Management is treating employees fairly.**	3.25	O	6
6. **The Management treat employees well, give equal opportunities and better pay.**	3.35	O	3
7. **Hotel employees are paid for time off if they are volunteering**	3.18	O	8
8. **As part of the CSR, the Hotel Management promotes gender equality, empowering women**	3.38	O	1.5
Composite Mean	**3.29**	**O**	

Scale: 3.50-4.00: Always (practiced daily); 2.50-3.49: Often (practiced quarterly); 1.50-2.49: Sometimes (practiced annually); 1.00-1.49: Never (never practiced)

Table 5 indicates the CSR practices in terms of ethical labor practices. The computed composite mean score of 3.10 implies that the employees have positive response on the CSR practice in terms of ethical labour practices. First in the rank, the employees react positively that the code of ethics is clearly disseminated to them (3.38). Dissemination of code of ethics is one of the responsibility of the human resources. Generally, the code of ethics is discussed during the hiring process, if not in a separate operational meeting. However, in some cases like small scale hotels, they made use of paper dissemination and indicating that to their employee's manual and letting the employee sign agreeing that they have read and fully understand what is written in the manual. According to Lee and Tsang (2013), there is an increasing concern with regards to ethics in the working environment as there is also a growing complexity to the hotel industry. Thus, hotel front liners agreed that ethics is one of the most essential issues that are being faced in today's generation. As the recent study reveals, if a working environment has a positive ethical value, this would equate to a healthy working environment which may result to job satisfaction thus enhanced customer satisfaction and eventually increasing the profit (Knani, 2014). As it is clearly seen, being the first in the rank only proved that dissemination of code of ethics as part of the CSR is a good advantage on the part of the hotel in return. Gender equality is also promoted as well as

empowering women (3.38) also topped in the ranking. One HR manager affirms that they have no gender requirement in hiring for a position, both men and women are now doing the same job as prescribed in the job description; however, they have included minimum age as a requirement. Also, in a developing country like the Philippines, gender equality is no longer an issue. Everyone, regardless of the gender is given equal opportunity. As it is also evidently seen during the data gathering process, most of the front office staff that the researcher talked to are in equal number for men and women. In Addition to that, in the recent report in Global Gender Gap of 2014 by World Economic Forum, out of 142 countries, Philippines is in the 9th rank in terms of Gender Equality (MacPhail, 2015). Furthermore, according to Bayeh (2016), when women are being empowered in all means and when gender equality is being achieved, it is the only time when the country will achieve sustainable development. This calls for the commitment of concerned people to be conscious of giving equal opportunity. Effective gender equality will result to positively perceived CSR initiatives that in return has a big impact on customer loyalty (Kim and Kim, 2016).

However, the lowest in the obtained weighted mean of 3.22, is developing an employee bonus program that awards workers who figure out how to make the company's goods even more sustainable. Having this bonus reward system boost the morale of the employees as it encourages and motivates people to be more active in participating. However, originally, CSR is a volunteer act. Awards system is just an additional self-fulfilment that the employee may receive. Nonetheless, additional awards and cash incentive may be added for boosting factor and motivation for others to also participate but is not necessary. Making it the lowest rank proves that the hotel, resort and tourist's inn may lack bonus program such as giving awards and recognition. According to Zientara, Kujawski, and Bohdanowicz-Godfrey, (2015) a hotel company who wanted an end goal of committed and well-engaged employees should consider and embrace CSR. In the recent study of Radwan (2015), he found that to enhance the organizational commitment, CSR should be considered, However, CSR is not being considered for employee retention. Business standards is being refined amongst personnel by participating the hotel CSR initiatives and engaging in any activity related to the corporate social responsibility where their social skills are being observed (Luu, 2017).

Table 6: Summary of CSR Practices

Indicators	WM	VI	R
1. Ethical Labor Practices	3.29	O	2
1. Social Engagement	3.10	O	4
2. Philanthropic Effort	3.22	O	3
3. Environmental Effort	3.48	O	1
Composite Mean	**3.27**	**0**	

Table 6 presents the summary of the CSR practices of hotel industry. The computed composite mean score of 3.22 implies that the employees have positive response on the CSR practices. The most commonly practiced CSR among hotel establishments is in relation to environment (3.48) followed by practices relating to ethical labour (3.29) and philanthropic (3.22). The least practiced in corporate social responsibility in the social engagement having the weighted mean of 3.10. Environmental effort is the most practiced CSR among hotel establishments gearing towards sustainable tourism. The world tourism organization promotes environmental protection through the platform 17 Sustainable Development Goals (SDGs) where it focuses on 17 key areas that the hotel, resorts and other tourism business should be prioritizing which is in line to the global agenda for people, planet, prosperity and

peace. Moreover, those corporate social responsibility practices of hotel industry relating to ethical and philanthropical followed as it also depicts higher responsibility among the hotel management to be considerate of and be committed to attain their CSR goals. However, the least practiced corporate social responsibility is in relation to social engagement nonetheless the hotel knows there is a need to improve on this matter. In addition to that, as Gao and Mattila (2014) perceived, the friendliness and capability of the hotel employees may intervene with the service results and guest's delight. The hotel employees are more effective when they were motivated thus in return customer will be satisfied. Since based on the research findings of Liu, Wang, Tian, & Tang, (2017) who suggested to hospitality industry to observe their employee's engagement to CSR to create awareness and self fulfilment to organizational sustainable projects. This may result to an improved hotel performance and profitability.

Table 7: Difference of Responses on the CSR Practices when Grouped according to Classification of the Accommodation Establishment

	F	Sig.	Interpretation
Environment	4.215*	.017	Significant
Philanthropic	2.241	.111	Not Significant
Social Engagement	1.651	.196	Not Significant
Ethical Labor	1.135	.325	Not Significant

Data showed in Table 7 that significant difference exists on the practices of CSR in terms of environment when grouped according to classification as denoted by the computed p-value of .017 which is less than 0.05 alpha level. However, no significant difference exists on philanthropic (.111), social engagement (.196) and ethical labour (.325) as denoted by the computed p-values which are greater than 0.05 alpha level. This signifies that based on the post hoc test result, respondents from resorts have significantly higher level of responses on the practices of CSR compared to tourist Inn.

The Environmental CSR practices has greatly positively affect in improving the reputation of the hotel (Khojastehpour and Johns, 2014). Moreover, the European Commission Green Papers, Mazur-Wierzbicka (2012) affirms that involvement of the top management to social and environmental sustainable projects of the corporate social responsibility should be voluntary. Thus, in any hotel chain, volunteering in an environmental awareness seminar may be essential as part of the corporate's future activity. Also, as hoteliers believe that more than the standard operating procedure that is set by the management official, they could also enhance the guest experience by integrating corporate social responsibility initiatives that is generally focusing on the current trend that is green hotel that is really affected by different variety of factors such as cost savings**,** economic incentives**,** regulatory affairs, improving the guest experience and enhancing the corporate brand image. This only proves that CSR may vary significantly in terms of the environmental aspect, most especially for the resort.

Table 8: Difference of Responses on the Practices of Corporate Social Responsibility when Grouped according to Location

	F	Sig.	Interpretation
Environment	.542	.705	Not Significant
Philanthropic	1.182	.322	Not Significant
Social Engagement	.852	.495	Not Significant
Ethical Labor	.429	.787	Not Significant

In Table 8, shows that there is no significant difference exists on the CSR practices when grouped according to location as denoted by the computed p-values which are greater than 0.05 alpha level. This signifies that location according to province is not a factor that determines the practices of CSR. It implies that across the region, they have CSR practices which can be considered unique among themselves and not common to only one province.

The CSR practices among hotel management may it be environmental protection, philanthropical activities, social engagement and ethical labour practices not vary according to location. In the recent regional developmental report, together with the regional development council, they determine different challenges; thus, creating these opportunities such as sustained demand in international market for electronics and semiconductor products. Sustained aggressive outbound investment promotion thru trade fairs and product promotion activities intensify government outbound investment missions, enhanced responsiveness of trade and technical vocation schools' curricula to suit industry requirements. Aggressive promotion entice prospective locators in establishing business operation in the eco zones. With this, practices in corporate social responsibility is highly encouraged among hotel industry to cope up with the emerging challenges and issues.

According of Liu (2014), the performance of the company to its participation to CSR activity does not have to do anything with the location; nevertheless, the level of the engagement of the employees to CSR may vary to the level of commitment of the corporate performance. This finding is applicable to any establishment or business who is under the service industry. Moreover, for every business entity that is trying to be involved in the CSR it should have an awareness with business ethics since it is essential part to both entrepreneur and academe. This is evidently important due to the emerging cultural diversity which is a key result to globalization. As the employees' perception to ethical pattern towards the business has an effect to the growing exploration as to the society is being observant to the inconsistent global arrangement (Wells, 2012). Most especially in the accommodation business, where culture is vast and evidently diverse, hotel employees may encounter dilemma with regard to how to deal with, however, the location is never an issue and is not significant in determining the significance of CSR of the hotel industry.

Table 9: Difference of Responses on the CSR Practices when Grouped according to No. of Years in Operation

	F	Sig.	Interpretation
Environment	.205	.935	Not Significant
Philanthropic	.633	.640	Not Significant
Social Engagement	.623	.647	Not Significant
Ethical Labor	2.292	.063	Not Significant

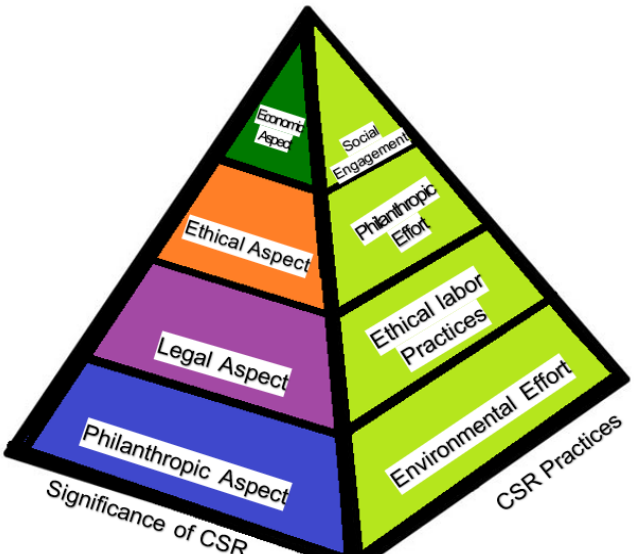
**Significant at p-value<0.05*

In table 9, no significant difference exists on the practices of CSR when grouped according to number of years in operation as denoted by the computed p-values which are greater than 0.05 alpha level. This signifies that number of years is not a factor that determines the practices of corporate social responsibility. It implies that no matter how young or old the accommodation establishments in the region, they still have the tendency to practice Corporate Social Responsibility on a manner where they see it beneficial for all stakeholders.

The length of operation is not a factor to determine the practices. For those hotels who have been established for more than 10 years now and those newly operated hotel and resort the practice of CSR is an important key for their success. CSR has been part of the industry no matter how long they have been established. Hotel institutions that are really into corporate social responsibility, more specifically in protecting the environment and in philanthropy movement, are not just creating a good image for themselves so that they could have positive result towards their guests. Moreover, the hotel management are able to support in diminishing the possibility for the organizational risk in legitimacy by the outcome of great visible ornament (Li, Fu, & Huang, 2015). There is a positive result for a hotel establishment may it be an Inn or a resort when the management prioritize and volunteer to participate in a philanthropy and environmental protection. Also, in one research, Cha, Yi, & Bagozzi (2016) concluded that the larger influence on behalf of individual identification together with the communal identification happens once the clients contribute or partake on the activity of the company related to corporate social responsibility. On top of the hotel employee's volunteerism, there is a personal greater effect to each individual who participates on CSR activity. It may be reflected on their values, action, and words.

Discussions and Conclusions

The framework is composed of CSR practices on the right side It is arranged based on the degree of importance and weight. For CSR practices, the commonly practiced CSR among hotel industry are those of environmental effort (3.48) followed by ethical labor practices (3.29) and then philanthropical effort (3.22) and social engagement as the least practiced (3.10). On the other hand, the Significance of CSR is at the left side, also arranged based on its weight. CSR evolves within the four main and core responsibilities. Economic depicts the corporation's ability to be profitable, legal, which mainly concern with obeying the law; ethical is tackling about knowing what is right and fair and philanthropical depicts being a good corporate citizen (Carroll,1983; Dudovskiy, 2012). Moreover, this framework made use of pyramid, as inspired by Carroll's Pyramid. In ancient time, pyramid in Egypt are used as a tomb for those of the highest form of humankind such as king, pharaoh, gods and goddesses. Its foundation is as strong as a rock building for thousands of years. In relation to CSR, let CSR be the foundation of hotel industry which



Borbon CSR Framework of Commitment for Hotel Industry

shall be strong as rock, making that as everyone's commitment to strive continuously thus, its goals will be only achieved in years' time with commitment as the foundation.

Hotel in today's generation are now gearing towards green hotel where in hotels all over the world are more conscious in protecting the environment as well as the social being. It is the commitment of the hotels to go green by ensuring environment and social practices which in return will improve the economic stability of the business establishment. Reduce, Reuse and Recycle are most commonly practiced by the hotels to promote efficient waste management, In addition, numerous hotels recycle used paper as an inter-department communication not only for cost cutting but also to save more. Legal aspect denotes that the hotel has the commitment to abide the law, boosting the engagement of the employees and increasing the public image and the hotel's reputation. This only proves that the environment and social CSR practices influence the legal aspect of the hotel. One of these practices is the hotel's commitment for continuous dialogue with the local community regarding the safety and environmental policies. Aside from the enumerated CSR practices, hotels are also encouraged and has the commitment to train and treat their employees making it as their social responsibility to obey the labor law.

Hotel establishments around CALABARZON are mostly located around coastal areas of Batangas; they exist between 6-10 years, providing accommodation and luxury to tourists away from home. The hotel, resorts and tourist inn have higher level of corporate social responsibility practices primarily in the environment related efforts. Moreover, Resorts have significantly higher view on the level of significance of CSR in terms of legal aspect as well as on the CSR practices compared to tourist inn; meanwhile, those respondents from accommodations with 6-10 years in operations of CSR in terms of economic aspect have at the same time with lower problems encountered in terms of social aspect. CSR officer may be elected as part of the public relation or human resource to monitor the CSR activities and its effect to the economic stability of the hotel, resorts and tourists' inn. Points and reward program may be utilized by the hotel, resorts and tourist inn. This may be awarded to boost volunteerism and be involved in community CSR initiative Also, as a recommendation, Universities in CALABARZON may strengthen their CSR program and insert CSR as part of their curriculum to widen the CSR commitment. Moreover, the Hotel Management may give focus to the issue on climate change and issue on pollution by coming up with an awareness program to their benefactors that would result to environmental protection

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MEDIATING EFFECTS OF WORKERS' ATTITUDE ON RELATIONSHIP BETWEEN OSHMS AND OSH CULTURE: CONSTRUCTION INDUSTRY IN SARAWAK

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Abstract: *This study aims to investigate the mediating effects of workers' attitude on relationship between OSHMS and OSH culture. Workers' attitude is a predictor of behaviour; thus, it is important in the construction industry to shape the right attitude of the workers in order to shape good OSH culture. Most of G7 construction companies are adopting or adapting the OSHMS either OHSAS 18001 or MS 1722 in order to manage OSH systematically in their workplace. However, occupational accidents are still contributing to the national accident statistics. Workers' attitude is considered as a crucial element in the establishment of OSH culture. With systematic OSHMS and the right attitude of workers toward OSHMS, OSH culture can be established in the workplace. A self-administered questionnaire was distributed to the involved construction sites. The questionnaire form was consisted of four sections, namely socio demographic, OSHMS elements, attitude, and OSH culture. The questionnaire was distributed to five on-going construction sites in Kuching and two in Bintulu. There were 365 workers responded to the study. The findings showed that the mediation of workers' attitude was only occurring in training and site inspection. There was no mediation occurred in OSH policy, HIRARC, role and responsibility, and on management review. The findings also showed that level of education, the origin, no. of working experience, and commitment of management were the factors that influence the mediation effect of the workers' attitude on OSHMS and OSH culture. This situation also depicted the OSH culture of the construction industry in Sarawak.*

Keywords: *attitude, construction industry, Occupational safety and health management system (OSHMS), OSH culture*

Introduction

Construction industry is important in contributing to the growth of the country's GDP. The industry is also crucial in developing the infrastructure in the country and providing working opportunity to Malaysians. However, construction job is the most dangerous industry (Bhattacharjee and Gosh, 2011), and it contributed most of the accidents involving death compared to other sectors (Rosenfeld *et al.* 2006) that makes construction works is one of the most dangerous industry in developing countries (Alhajeri 2011). Normally accident occurs is due to the unsafe behaviour that perform by the workers (Yakubu & Bakr 2012, Dumrak *et*

al. 2013, Albert *et al.* 2014). The Department of Occupational Safety and Health Malaysia (DOSH) and the Construction Industry Development Board (CIDB) have joined forces to ensure the industry players are implementing the proper occupational safety and health management system (OSHMS). Proper OSHMS such as OHSAS 18001 and MS 1722 would be able to in fluence and enhance the workers' attitude and behaviour (Vinodkumar and Bhasi 2010, Choudhry 2014).

Worker's attitude is important in shaping good OSH culture in workplace (Zou *et al.* 2007) and improve the overall OSH performance of the organisation (Zanko and Dowson 2012). Workers' attitude and occupational accident is strongly correlated (Donald and Carter 1994).

In order to change human behaviour first need to change the attitude (Geller 1998). Because attitude is consisted of believe, feelings, and intention to act. The workers will observe OSHMS closely if he or she believe that OSHMS is implemented so that the workers are protected from the occupational accidents and injuries. Otherwise, the workers will ignore the implementation of OSHMS in the workplace. In other words, the person with negative attitudes toward OSH will always decide to behave unsafely.

This is crucial in the design of any attempts to improve OSH performance through attitudinal change. Changing human behaviour requires changing their attitudes and belief (Lingard and Rowlinson 2005, Shamsul H. M and Roslan A 2015). Attitude is seen as a mediator between the OSHMS and the OSH culture. Therefore, this study aims to investigate the mediation effects of workers' attitude on relationship between OSHMS and OSH culture.

Methodology

This research was conducted in construction sites in Sarawak. The self-administered questionnaires were distributed to the ongoing projects which the amount of the total project cost was 20 million and above as those projects were practicing proper OSHMS in the workplace. There were 7 construction project sites throughout Sarawak which fulfilled the criteria. All of the projects were building construction.

The questionnaire was developed in four sections, namely socio demographic (6 questions), OSHMS elements such as OSH policy (five questions), hazard identification (five questions), risk assessment, and risk control (HIRARC) (five questions), role and responsibility (questions), training, site inspection (five questions), and management review (five questions), attitude (five questions), and OSH culture (six questions). The variables for OSHMS elements was referred to the OHSAS 18001, the attitude and the OSH culture were from the relevant literature review. Five-point Likert scale was used for each item where 1=strongly disagree, 5 = strongly agree.

G power was used to determine the sample size. Suggested sample size was 337 in order to reach 95 percent of the total sample size. However, the final sets of questionnaires which were completed and could be used and analysed were 365 in total (N=365) out of 1000 questionnaires. The demographic data was analysed by using SPSS and the Structural Equation Model was analysed by using the Partial Least Square (PLS). The research model is illustrated below.

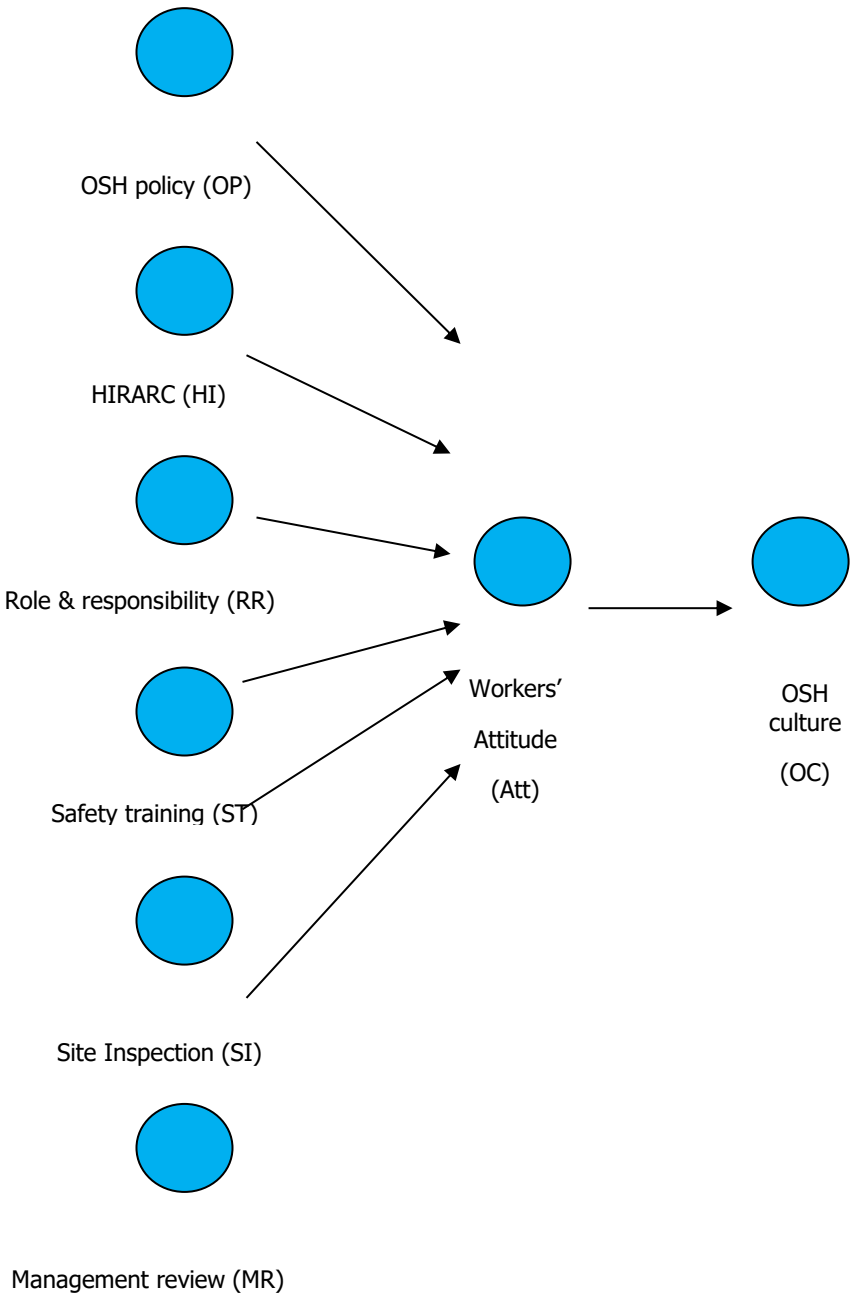

Figure 1. Research model

Results

This part presenting the results of demographic data analysis and the research model analysis including the measurement model analysis and the hypothesis test result.

Demography

Table 1: Distribution of socio-demographic (N=365)

Characteristic		N	%
Age	16 - 19	11	3
	20 - 24	51	14
	25 - 29	77	21
	30 - 34	71	20
	35 - 39	75	21
	40 - 44	40	11
	45 - 49	19	5
	50 - 54	12	3
	55 - 59	4	1
	60 - 65	3	1
Work experience	1 - 5 years	162	47
	6 - 10 years	107	31
	11 - 15 years	34	10
	16 - 20 years	22	6
	21 - 25 years	9	2
	26 - 30 years	9	2
	31 - 35 years	3	1
	36 - 40 years	1	0
Nationality	Indonesian	193	53
	Malaysian	166	45
	Bangladesh	6	2
Education level	Primary level	230	65
	Secondary level	135	37
Training attended	Green card (CIDB)	152	14
	Working at height	114	11
	PPE compliance	202	19
	First Aid	46	4

	Site safety induction	224	21
	Emergency response plan (ERP)	64	6
	Electrical safety	48	5
	Fire Safety	96	9
	Confined Space	23	2
	Heavy Lifting	50	5
	Manual lifting	42	4
Workers' trade	Scaffolds erector	36	9
	Carpenter	62	15
	Painter	23	6
	Tiler	19	5
	Air-con installer	18	4
	Water proofing	2	0
	Brick layer	40	10
	Plasterer	10	2
	Bar bender	13	3
	Bar installer	24	6
	Plumber	5	1
	Pile crew	2	0
	General workers	115	28
	Crane operators	13	3
	Electrician	7	2
	Roof installer	3	0
	Ceiling installer	6	1
	Excavator operator	7	2

Analysis of research model results.

The analysis continued with the measurement model analysis which three criteria would be assessed namely the internal consistency reliability, convergent validity and discriminant validity.

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Table 2: Measurement model analysis

Constructs	Items	Loadings	CR	AVE	R^2
OSH policy	OP1	0.765	0.900	0.644	
	OP2	0.818			
	OP3	0.885			
	OP4	0.868			
	OP5	0.656			
Hazards identification, risks assessment, and risks control (HIRARC)	HI1	0.831	0.835	0.632	
	HI4	0.657			
	HI5	0.889			
Roles & Responsibility	RR1	0.884	0.870	0.628	
	RR2	0.829			
	RR3	0.685			
	RR5	0.741			
Safety training	ST1	0.728	0.834	0.557	
	ST2	0.779			
	ST4	0.745			
	ST5	0.725			
Site inspection	SI1	0.889	0.887	0.725	
	SI2	0.906			
	SI3	0.753			
Management Review	MR4	0.487	0.688	0.552	
	MR5	0.934			
Workers' attitude	Att2	0.811	0.777	0.540	0.085
	Att3	0.639			
	Att4	0.744			
Osh culture	OC1	0.582	0.848	0.587	0.214
	OC3	0.826			
	OC4	0.760			
	OC5	0.868			

Internal consistency of construct.

The internal consistency was determined by assessing composite reliability instead of assessing the Cronbach's alpha. The accepted values for the composite reliability was greater than 0.60 (Ramayah 2018, Hair *et. al*. 2017). Table 2 showed the values of CR were greater than 0.6 and equal to 0.9 which indicated the internal consistency reliability of the constructs.

Convergent validity

The convergent validity obtained by assessing the values of the average extracted variance (AVE) (see table 2). Eeach construct should reach for at least 50 percent of the assigned indicators' variance (AVE ≥ 0.50) (Bagozzi and Yi, 1988; Fornell and Larcker, 1981; Hair *et al*. 2017). The lowest values including the negative values were deleted one by one (Henseler, Ringle, and Sinkovics, 2009) until the composite reliability and the AVE values reached to the satisfactory values (Henseler *et al*. 2009) The deletion of the indicator must not more than 20 percent (Hair, Babin, and Krey, 2010). Table 2 showed that the values of CR and AVE were greater than 0.50 and that indicated the convergent validity was established.

Discriminant validity

The outer loadings were shown in table 3 showed that all loading scores were not reached 0.1. This indicated the discriminant validity between the constructs has established and there was no issue of high cross-loading among the construct. Other method of assessing the discriminant validity was by assessing the Fornell-Larcker's criterion.

Table 3: Discriminant validity test - cross loadings results

Construct	Item	Att	HI	MR	SI	OC	OP	RR	ST
Management review (MR)	MR4	0.054	-0.031	**0.487**	-0.028	0.057	-0.03	0.109	0.132
	MR5	0.133	-0.047	**0.934**	-0.018	0.165	0.235	-0.043	0.254
Workers' attitude (Att)	Att2	**0.811**	0.142	0.122	-0.062	0.261	0.172	0.216	0.155
	Att3	**0.639**	-0.02	0.103	-0.026	0.107	0.057	-0.006	0.198
	Att4	**0.744**	0.08	0.079	-0.133	0.194	0.049	0.067	0.201
OSH Culture (OC)	OC1	0.180	0.048	0.195	-0.193	**0.582**	0.165	0.191	0.167
	OC3	0.243	0.122	0.058	-0.127	**0.826**	0.206	0.24	0.295
	OC4	0.164	-0.100	0.126	-0.106	**0.760**	0.146	0.042	0.251
	OC5	0.229	0.036	0.151	-0.137	**0.868**	0.129	0.131	0.271
HIRARC (HI)	HI2	0.095	**0.831**	-0.07	0.14	0.080	0.037	0.328	0.099
	HI4	0.043	**0.657**	-0.088	0.038	0.001	0.099	0.325	0.095
	HI5	0.112	**0.889**	-0.004	0.058	0.020	0.127	0.482	0.107
Site Inspection	SI1	-0.094	0.143	-0.022	**0.889**	-0.164	-0.075	-0.074	-0.084
	SI2	-0.091	0.069	-0.029	**0.906**	-0.182	-0.059	-0.078	-0.109

(SI)	SI3	-0.081	0.048	-0.014	**0.753**	-0.115	0.018	-0.076	-0.057
OSH policy (OP)	OP1	0.105	0.202	0.123	-0.070	0.199	**0.765**	0.261	0.151
	OP2	0.078	0.134	0.139	-0.061	0.271	**0.818**	0.238	0.168
	OP3	0.112	0.062	0.185	-0.059	0.152	**0.885**	0.032	0.237
	OP4	0.141	0.099	0.147	-0.055	0.16	**0.868**	0.089	0.197
	OP5	0.102	-0.065	0.196	0.053	0.098	**0.656**	-0.067	0.274
Role & Responsibility (RR)	RR1	0.169	0.563	0.000	-0.067	0.154	0.098	**0.884**	0.154
	RR2	0.091	0.406	0.009	-0.092	0.202	0.106	**0.829**	0.168
	RR3	0.077	0.185	-0.014	-0.095	0.215	0.053	**0.685**	-0.007
	RR5	0.116	0.241	0.008	-0.046	0.122	0.139	**0.741**	0.177
Safety Training (ST)	ST1	0.152	0.066	0.189	-0.08	0.321	0.219	0.073	**0.728**
	ST2	0.155	0.067	0.206	-0.072	0.222	0.200	0.145	**0.779**
	ST4	0.199	0.159	0.172	-0.057	0.181	0.150	0.166	**0.745**
	ST5	0.198	0.061	0.239	-0.085	0.260	0.204	0.108	**0.725**

Table 4 showed the fornell-Larcker's criterion, where all values or the square root of AVE on the diagonal were higher than the correlation on the off-diagonal.

Table 4: Discriminant validity test - Fornell-Larcker Critirion

	Att	HI	MR	SI	OC	OP	RR	ST
Att	0.735							
HI	0.113	0.799						
MR	0.137	-0.053	0.745					
SI	-0.104	0.104	-0.026	0.852				
OC	0.272	0.048	0.166	-0.182	0.767			
OP	0.139	0.106	0.197	-0.048	0.212	0.803		
RR	0.155	0.479	0.002	-0.089	0.206	0.128	0.789	
ST	0.241	0.123	0.272	-0.099	0.326	0.257	0.168	0.745

Based on Fornell-Larcker's criterion result it indicated that discriminant validity was established. The last test of determining the determinant validity was by assessing the HTMT values. Table 5 showed that the values of the HTMT ratio were lower than the required threshold value of HTMT 0.85 (Kline, 2011) and HTMT 0.90 (Gold et al. 2001), that indicated the discriminant validity was established.

Table 5: Discriminant validity test - Heterotrait-Monotrait (HTMT) ratio

Construct	Att	HI	MR	SI	SC	OP	RR
Att							
HI	0.180						
MR	0.329	0.158					
SI	0.168	0.128	0.066				
OC	0.373	0.138	0.353	0.235			
OP	0.183	0.178	0.375	0.107	0.273		
RR	0.186	0.568	0.217	0.118	0.273	0.198	
ST	0.371	0.191	0.597	0.127	0.437	0.326	0.217

Hypothesis testing

The hypothesis test is to show the mediation effect of workers' attitude in relationship between the OSHMS and OSH culture. Table 6 is showing the hypothesis testing result with bootstrapping procedure.

Table 6: Hypothesis testing (Bootstrapping procedure)

Hypothesis	Relationship	Std. β	Std. error	T value	P Value	Bc value	LL	UL	Decision
H1	OP - > Att - > OC	0.057	0.066	0.998	0.318	0.004	-0.028	0.043	Not supported
H2	HI - > Att - > OC	0.059	0.070	0.838	0.402	0.005	-0.052	0.045	Not supported
H3	RR - > Att - > OC	0.022	0.061	1.359	0.174	0.002	-0.011	0.059	Not supported
H4	ST - > Att - > OC	0.176	0.061	2.881	0.004	0.003	0.012	0.093	Supported

H5	SI - > Att - > OC	-0.081	0.031	2.691	0.007	-0.004	-0.038	-0.007	Supported
H6	MR - > Att - > OC	0.079	0.051	1.559	0.119	0.005	-0.010	0.049	Not supported
H7	Att - > OC	0.272	0.061	5.257	0.001	0.012	0.115	0.360	Supported

Discussion

The research findings showed that the mediation effect of workers' attitude was occurred only between OSHMS and OSH culture on safety training and site inspection. The hypothesis testing result showed that the mediation effect of workers' attitude was only occurred between
safety training (H4) and site inspection (H5) and OSH culture. However, there was weak or no mediation effect of workers' attitude between OSH policy (H1), HIRARC (H2), role and responsibility (H3), management review (H6) and Osh culture. There are factors that influence the result such as the age of the respondents, the education level of the respondents, the origin of the respondents, the number of working experiences of respondents, the commitment of management themselves.

Age factor

Socio demographic data showed that most respondents age were between 25 – 29 where it was 77 percentage of total respondents. With this range of age showed that the industry was dominated with the young workers. This rage of ages was having all kind of perception that influence the attitude toward OSHMS in the workplace, for example macho image and risk-taking behaviour.

Education factor

It was about 230 respondents or it was 65 percent respondents were only attended primary school level. This situation where more than half of the respondents did not attend the secondary school level. The educated workers are likely to understand the safety and health in the workplace better. A study by Gyekye and Salminen (2009) found that there was a positive association between education and safety perception and most compliant with the safety procedures and recorded the lowest accident involvement rate. The education level of the respondents may influence the result of this research.

Nationality factor

The brought up of the person plays an important role in safety and health in the workplace. Malaysia as a developed country is very concerned of the safety and health of workers in the workplace regardless of the industry. Therefore, CIDB is providing site safety induction to all construction personnel to enhance their knowledge in safety and health in the workplace and also the country's OSH legislation requirement. However, examining the socio-demographic data the respondents of this research were dominated with Indonesian workers where 193

respondents or 53 percent of the total respondents were Indonesian. The Indonesian workers are not familiar with Malaysia OSH legislation requirement and practices. This situation may influence the attitude of workers and thus influence the result of this research.

Number of working experiences factor

The number of working experiences of the respondents is may also influence the finding of this research. The finding showed that the respondents were dominated by the young workers where their number of experiences working in construction sites was less than five years though

some of them were having work experience more than that but less than ten years. Though the respondent were having such experience but probably they were working in the small projects which having no proper OSHMS. This situation also can influence their attitude and behaviour in the workplace.

Management commitment factors

Management commitment is crucial in influencing workers' attitude and behaviour. Nevertheless, in this research the commitment did not show their commitment as the supposed to provide. The socio-demographic data showed that most respondents did not registered with CIDB and did not attend the construction site safety induction training that provided by the CIDB. The data showed that only 152 respondents or only 14 percent have registered with CIDB and attended the construction site safety induction training. In CIDBA 1994 (Act 520) stipulated that all construction personnel shall be registered with CIDB and shall attend the construction site safety induction training by CIDB. This situation showed that the management of the construction players were not committed in complying to the country OSH legislation. Though the most of the construction companies provide in house safety training such as site safety induction training but it is important for the companies to register their personnel to CIDB as their effort to comply with the OSH legislation.

Conclusion and recommendation

As conclusion to improve the situation in the industry, it is recommended that the relevant authorities have to discuss the OSH requirement with the neighbouring countries where their people are involved in the construction industry in Malaysia. The matter that can be discussed are;Those workers especially from the neighbouring or foreign countries shall be trained first in their origin country pertaining to OSH practices and legislation in Malaysia that they need to comply with before they are allowed to come and work in Malaysia. This is to get the foreign workers to be ready before they are employed in Malaysia; The industry shall do the screening of the workers especially from the neighbouring countries before they are employed to ensure they have received proper OSH training in their own country; The OSH legislation shall be tightened with higher penalty amount to those contractors who do not register their workers with CIDB, including the foreign workers and send them to the construction site safety induction organised by CIDB or simply known as green card training; Construction site audit need to be done more frequent by the authorities to ensure the OSHMS is implemented with full commitment from the management of the construction players; Reward and punishment need to be implemented in order to motivate workers to participate actively in the implementation of the OSHMS in the workplace. It is obvious that workers' attitude shall not be ignored as the attitude will determine the behaviour. Thus, will shape the OSH culture in the industry.

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ANALYSIS OF STYLE DRIFT: EVIDENCE FROM MALAYSIAN SUKUK FUND

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Abstract: *Investors make their decisions on what is known about a fund through all information regarding the strategies and fundamentals of investment fund. A reliable information is essential in order to make effective investment decisions and to construct an optimal portfolio return. However, funds can be incorrectly classified when evaluating them and making allocation decisions. This study examines the style drift of sukuk fund from the return based style analysis. The findings indicate that majority of sukuk funds invest mainly in short term money market and sukuk to generate fixed income for investors. The result also shows that only a few sukuk funds indicate significant drift in its style from the original objectives.*

Keywords: *Investment style, Asset allocation, Return-based style analysis, style drift, Sukuk*

Introduction

Investors allocate their investments among different asset classes as a vital strategy to set expectations for risk tolerance and potentially to escalate returns. Their investment decisions are based on style or objective of a managed fund (Brown, Harlow & Zhang, 2015; Elton, Gruber, Brown & Goetzmann, 2014; Kim, Shukla & Tomas, 2000). These styles of funds are disclosed in fund prospectus by the fund provider that also consists of investment policy, objective, risks and fees (Bams, Otten & Ramezanifar, 2017).

Nevertheless, other studies suggested that the fund's prospectus is not the best material for investors to obtain information about the fund in searching for the right fund to match the risk-return acceptance level (e.g. Kim et al., 2000; Ainsworth, Fong & Gallagher, 2008; Bams et al., 2017). DiBartolomeo and Witkowski (1997) and Ainsworth et al. (2008) found return patterns are being seriously misclassified and contrasted from the assigned benchmark declared in the prospectus language because the fund managers did not strictly comply with their stated objective. This style inconsistency, or style drift can expose to inferior performance (Bams et al., 2017). Undeniably, this situation can affect undesirably on investors in various ways (Brown & Goetzmann, 1997; Mintzer & Littmann, 2000).

In other perspective, the contemporary innovations in Islamic finance have transformed the innovations of its industry especially in the area of sukuk or Islamic fixed income securities (Kamarudin, Kamaluddin, Manan & Ghani, 2014). Sukuk fund is a diversified portfolio that consists of majority Islamic bond and other proportion of securities under the principles of Shariah as an alternative to the conventional funds. Notably, Malaysia is the major sukuk market in the world and keep getting an attention of the worldwide

investors to observe the potential this type of asset class (Bakar, 2018). Nonetheless, there is still limited research in this respect despite the fact that the prevalence of sukuk has increased among corporate issuers and investors. The empirical evidences concerning the effect of sukuk fund returns has yet to be analyzed in detail and comprehensive due to data limitations (Zakaria, Isa & Abidin, 2012).

As a result of the drawbacks identified in this section, the limitation of empirical evidence on sukuk funds with regard to the impact of misclassification on performance is worth considering. Thus, this paper aims to examine the style drift of sukuk fund from the return based style analysis (hereafter RBSA). The remainder of the paper is structured as follows. The following section is about literature reviews as well as theoretical discussion that lead to the hypothesis development. Next, methodology section and empirical results are presented. Lastly, discussion and conclusion are discussed in this paper.

Literature Review

Return-based style analysis

The study on equity style analysis has long stirred interests of many groups of people including financial advisors, money managers, and academics among others to describe the characteristics of an investment portfolios. The style analysis later might reveal how investment portfolios are being constructed according to one's tolerance towards risks. There are few approaches used to examine the fund's investment style; (1) RBSA (Sharpe, 1988, 1992); (2) Portfolios-composition based approach; (3) Data development analysis (Alexakis & Tsolas, 2011). The RBSA is particularly used to assess the strategies on making asset allocation (Faff, Gharghori, Ip & Nguyen, 2012). When Sharpe (1988, 1992) first introduced the RBSA, Sharpe used the term "effective asset mix" and "attribution analysis" to explain the RBSA. However, in recent years, the term RBSA is often being used to describe Sharpe's method. The term is used to emphasize the reliance on past returns as opposed to other methods of style or attribution analysis that do not rely on returns. Authors that have adopted RBSA approach include Faff et al. (2012), Das and Rao, (2013), Dor and Jagannathan, (2002), Domian and Reichenstein (2008), among others.

Majority of the previous literature documented used data from overseas like the U.S, Australia, Spain, among others. However, even with the vast previous literatures available adopting the RBSA (e.g. Castellanos & Alonso, 2004; Das & Rao, 2013; Domian & Reichenstein, 2008; Dor & Jagannathan, 2002; Faff et al., 2012;), in the context of Malaysian market the evidence of previous literature on Malaysian sukuk funds is hardly to be found. Thus, this paper is aimed to fill in this gap.

Style Drift

While the study on investment style has gained attentions of many researchers, it appears relevant to ask whether or not fund managers actually remain true to self-reported fund indicators. This is because the style classifications are only useful if fund managers adhere to self-reported fund indicators (Brown & Goetzmann, 1997). It is crucial that a fund manager's self-stated investment objective should be able to convey information to the investors at its highest accuracy particularly about how the portfolio should be managed. However, previous studies had shown there was a substantial number of funds deviate from their investment style (e.g. diBartolomeo & Wikowski, 1997; Brown & Goetzmann, 1997; Kim et al., 2000; Kim, White & Stone, 2005). Having style drift could have an undesired effect on the fund's performance, risk and other fund attributes which may contribute failing in meeting the expectations of investors (Ainsworth et al., 2008). Besides that, there is also an issue in

understanding style drift is in terms of how to define and measure a fund's style (Ainsworth et al., 2008).

According to Cooper, Gulen and Rau (2005) changes in the self-stated style of mutual funds in the U.S. had proven to affect fund's flow with greater fund inflows experienced by funds that associate their name with styles that are more known and popular at that particular point of time. They also stated that fund managers do not always adhere to maintaining a portfolio consistent with their stated philosophy. In regards to this, diBartolomeo & Witkowski (1997) and Brown & Goetzmann (1997) also found that there was a misclassification problem suffered by some funds and most likely affect its possibility to deliver the expected risk-return that is consistent with what investors desired.

Moreover, diBartolomeo & Witkowski (1997) documented that around 40% of the analysed funds were misclassified. The funds observed were both classified in a lower-risk category as well as higher-risk category. Funds that being classified in higher-risk category tend to perform with better results than the average. Besides, they found that the possibility of funds misclassification is lower if it belongs to larger management company. However, the risk of having fund misclassification is found to be higher if it involves large funds. This is due to greater complexities and difficulties associated with larger funds in managing its asset to be in line with their investment styles. Similarly, Kim et al. (2000) also found that 46% of the funds are classified in their respective categories however 54% were misclassified. They performed discriminant analysis where the variables tested are used as the explanatory factors to examine fund classification.

Brown and Goetzmann (1997) investigated the accuracy of mutual fund classification system and they also attempted to investigate whether the mutual fund classification system is relevant to be used in explaining the differences in future returns of funds. In which, they concluded that the current classification system is inefficient. As a result, they found that the new proposed system had greater capability in explaining the future variability of fund returns.

Cao, Illiev and Velthuis (2017) in their study stated that investors are likely to pick small-cap funds with the assumption that the risk exposures will be relatively low. Besides that, if there is a possibility of obtaining gains though in the short-term could also lead to managers be tempted to deviate from their objectives given with labour market pressures and can lead to conflict of interest between managers and investors. They found that larger and older small-cap funds are more likely to hold mid- and large-cap stocks. It is consistent with funds deviating from their objective over time.

Given with all the previous studies had documented it is important to take note that the difference in underlying stocks characteristics may change overtime, to a certain extent deviation from the stated investment style on a long-term basis is inevitable. This could be potentially true if a fund manager is passively holding the same stocks over time. The stock might be a small-cap stock and over time may grow up and become a large-cap stock (Bams, et al., 2017). Style deviation to a certain extent may be accepted however if it is too much, it can be an indicator that fund managers have changed the investment strategy and could be moving away from the fund's stated objective. In this case, it is crucial for investors to take into account the degree of the style deviation to ensure that they are still in line with their long-term investment objectives. Thus, it is equally crucial also to know the extent of style deviation by quantifying it and to put mutual funds in terms of investment style deviation (Bams et al., 2017). Hence, based on the literature in this research, our testable hypothesis is:

H1: There is no significant different in style drift and asset allocation from funds' original objective.

Research Methodology

Data collection

The sample of this study selected based on the prospectus of unit trust funds issued by the asset management companies in Malaysia and the Federation of Investment Managers Malaysia (FIMM). There are 18 funds under the category of sukuk or Islamic bond funds available within January 2013 to December 2017. As for asset classes to show the styles of unit trusts such as growth stocks, value stocks, cash, sukuk, and international stocks, data collected from various website that are presented in Table 1. These asset classes selected are based on Lau (2008).

Table 1: Asset Classes' Indices

Asset Class	Description	Source of Data
Growth Stocks	*MSCI Malaysia Growth Index as quoted in MYR used to represent growth stock.	www.msci.com
Value Stocks	*MSCI Malaysia Value Index as quoted in MYR used to represent Value stock.	www.msci.com
Cash	Islamic fixed deposit profit rate to represent Malaysian Islamic money market instrument	Bank Negara Website
Sukuk	Bloomberg Malaysian Sukuk Ex-MYR Index used as index for this asset class which represent Malaysia fixed income markets.	Bloomberg terminal
International Stocks	*MSCI World Index as quoted in MYR used to represent all international stock indexes.	www.msci.com

* MSCI indices developed by Morgan Stanley Capital International

In order to fulfill the objectives of the study, style analysis (Sharpe, 1992) is used. Sharpe (1992) used quadratic programming to conduct RBSA in order to examine the changes in the funds' asset allocation based on the changes in the returns of major asset classes. According to Sharpe (1992), style analysis had two major constraints: (1) the sum of all coefficients factors is equal to 100% and (2) coefficients of all factors must be positive. Negative coefficients show that there are short positions in asset classes. However, Sharpe (1992) argued that fund managers rarely use the short position strategy as fund managers use buy-and-hold investment strategy. Thus, by prohibiting negative coefficients in the model, it will provide better and more usable results. This analysis is basically based on Sharpe's (1992) generic factor model which is as follows:

$$\widetilde{R_i} = [\, b_{i1}\widetilde{F_1} + b_{i2}\widetilde{F_2} + b_{i3}\widetilde{F_3} + \ldots + b_{in}\widetilde{F_n} \,] + \widetilde{e_i} \qquad (1)$$

where

$\widetilde{R_i}$ = return of fund *i*

b_{in} = sensitivity of fund *i* to factor *n*

$\widetilde{F_n}$ = return factor *n* of fund *i* represent the asset class benchmark

$\tilde{e}_i$ = non-factor return of asset *i* of mean zero with the assumption that the non-factor returns are uncorrelated

Based on this equation (1) and the constraints of this analysis, the coefficient (b_{in}) indicate he weight of each asset class within the portfolio/unit trusts. This model used to analyse the style of each of the selected Islamic bond funds. The style obtained from all period's analysis will be compared to the original objective stated in the prospectus of each unit trust in order to examine whether there is any style drift or not.

The funds' returns and asset classes' return calculated based on equation (2). The net asset value (hereafter NAV) of each unit trusts is used to calculate the continuous compounding return and used as the dependent variable (Sharpe, 1992; Lau, 2008; Domian & Reichenstein, 2009). Meanwhile, return of each asset class calculated using asset class index and 1-month Kuala Lumpur Inter-Bank Offer Rate (hereafter KLIBOR) as independent variables (Lau, 2008). The calculation of the continuous compounding return for each unit trust is as follows:

$$R_{j,t} = \ln (P_{j,t} / P_{j,t-1}) \quad (2)$$

and

$$R_{f,t} = \ln (1 + (r_{f,t}/12)) \quad (3)$$

where:

$R_{j,t}$ = The continuously compounded return of unit trusts fund *j*at time *t* or m benchmark portfolio for month t

$P_{j,t}$ = The NAV for unit trust fund *j* at time *t* or the asset class index at the end of month t

$R_{f,t}$ = The continuous compounding risk free rate of interest for month t

$r_{f,t}$ = 1-month KLIBOR

Subsequently, the R^2 or proportion of the variance in return as explained by the asset classes within the unit trust calculated as follows:

$$R^2 = 1 - [\ Var\ (\tilde{e}_i) / Var(\tilde{R}_i)\ ] \quad (4)$$

Equation (4) shows that the variation of returns of unit trusts can be explained by (i) the variation of returns of each asset class within the unit trust or *style* that is represented by R^2, and (ii) the residual returns due to active management or *the selection* that is represented by $Var(\tilde{e}_i) / Var(\tilde{R}_i)$.

Data Analysis

Based on Table 2 in appendix 1, the result indicates that generally almost all selected funds invest majority in money market instrument with the minimum investment level of 53.1% to maximum of 100%. However only a few funds that invest in sukuk such as AmBon Islam, CIMB Islamic Enhanced Sukuk, CIMB Islamic Sukuk, Libra Asnita Bond and MIDF Amanah Shariah Money Market but only in small allocation of fund. The result also shows that some funds also invest in global, value and growth stock but in a very small proportion compared to money market securities and sukuk.

In general, majority of the funds do not show any changes in its style when compared to funds' original objective especially fixed income fund. However, the RBSA shows AMB Dana Arif, CIMB Islamic Sukuk, Hwang AIIMAN Income Plus, and MIDF Amanah Shariah Money Market that originally categories as balanced fund has shown drift in the investment style that lead to the objective change to fixed income fund. This is because majority of these funds focusing on money market securities to generate fixed income for the fund holder. Table 2 also shows that PMB Sukuk fund's asset allocation style remain align with fund original objective since it shows that fund invest 55% in money market securities and 45% of mixed investment in stock market.

Referring to all funds' asset allocation plan as stated in fund's prospectus, it clearly shows that almost all fund plans to allocate the fund mostly in mixed of sukuk and money market securities. Although some fund show drift in their fund style of investment, all these funds still follow their assets allocation fund. However, drift in fund style compared to original objective give effect toward investor since they invest based on fund objective that align with their investment objective and any drift in style lead to mismatch between investor's investments objectives.

Table 2 also, result of R-square (R^2) represents the ability of style analysis to explain variation in fund monthly return. The result shows that style analysis for all funds have strong ability to explain variation in funds' monthly return. *R2* for all funds are within the range of 70% to 99% of variation in monthly returns of funds could be explained by funds' style based on RBSA.

Result in Table 2 also shows that Dana Al-Fakhim, Hwang AIIMAN Income Plus, Kenanga Bon Islam, and MIDF Amanah Shariah Money Market are significant at 1%, while only AmBon Islam and Pacific Dana Murni are significant at 5%, and Amanahraya Syariah Trust, AmDynamic Sukuk - Class A, CIMB Islamic Enhanced Sukuk, CIMB Islamic Sukuk, Libra Asnita Bond,MAAKL As-Saad, and PMB Sukuk only significant at 10% . These indicate that RBSA is significant to explain variation in funds' monthly return. This indirectly shows that style drift that deviate from funds' original objective for CIMB Islamic Sukuk, Hwang AIIMAN Income Plus, and MIDF Amanah Shariah Money Market are significant based on RBSA.

Monthly return variation of AMB Dana Arif, Eastspring Invt Dana Wafi, RHB Islamic Bond, PB Sukuk,and Public Sukuk found to be not significant to be explained by RBSA. Thus, it also shows that style drift shown by AMB Dana Arif is not significant and it cannot be explained by result of RBSA.

Conclusion and Discussion

This research applied the RBSA model to identify the class asset on sukuk fund return and the style drift of sukuk fund in Malaysia. The result indicated that only a few sukuk funds had shown significant drift in its style from the original objectives. Interestingly, none of fixed income sukuk funds were drift from its investment style. However, most of balanced sukuk funds provided strong support for style drift from theoretical point of view. This is consistent with studies conducted by reserachers such as Bams et al. (2017), Brown and Goetzmann (1997) and Mintzer and Littmann (2000). This condition can be viewed as an indicator of investment strategy switching that could deviate from the fund's stated objective by fund managers (Bams et al., 2017). Our focus in this research was solely limited on the sukuk fund in Malaysia. As such, the scope of our work could be expanded in various dimensions by future researches for potential interesting extensions. For example, one possible study could compare the style drift of sukuk fund and bond fund in a way to establish a comparison

between Islamic and conventional perspective. Furthermore, investigations from the standpoints of the cross-country could deliver interesting outcomes too. Future developments of this research also should increase the number of asset class indices that represent different benchmarking to create better comparison. Lastly, future research could also analyse the linkages between the style drift of sukuk and other financial and accounting variables to measure the fund performance that has received only limited attention in the literature.

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INTENTION TO APPLY PAPERLESS SYSTEM AMONG THE PUBLIC UNIVERSITY (UA) EMPLOYEES IN MALAYSIA: A CONCEPTUAL PAPER

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Abstract : *Green environment through e-government is seen increasingly more useful in today's economy and business due to its effectiveness and applicability in various fields. Paperless is one of the e-government services that have been practiced by many organizations today where the employees do their work through the eliminating paper usage. Despite the rapid acculturation of paperless system in many organizations, researchers have argued that it is yet to promote and establish a paperless practice that leads to sustainable and reliable approaches especially in working environment at the public university (UA) due to high perceived profitability by the stakeholders. Evidence shows that the traditional use of paper based process in daily working practices leads to many weaknesses, risks and financial burdens. This implies that it will be very important to truly embed behavioural intention (desire towards paperless practice) within a community of UA if individual perceptions of the use of information technology (IT) in the e-government service is the motivator factor. The paper aims to study the relationship of perceived organizational support dimensions within the paperless context which is underpinned by technology acceptance model (TAM) theory. This paper suggests a conceptual model to further understand the role of perceived organizational support in influencing employees' behavioural intention throughout the paperless process. This paper is then constructed into possible research hypotheses for future researches. The model of research will provide as a beneficial guideline for strategies determination in promoting e-government services, particularly the paperless based service.*

Keywords:: *Green environment, e – government, paperless, organizational support, Technology Acceptance Model (TAM)*

Introduction

The green environment is part of the rubric to promote the sustainability development of the Institute of Higher Learning beside of other six rubles - corporate, students, staff and community governance, relationships with the external industry and prolonged improvements (Manuel, Jesus, Maria & Francisco, 2013). According to Legacy (2004), vision and missionare important for mentioning goals towards sustainability development and how to

achieve them. Therefore, researchers believe that the theme and terms towards green environment should be placed in the vision and mission of a university to achieve that concept. Niko (2001) believes that an institution of higher learning can participate in environmental audits to promote green environment practices. Researchers argue, as a university it is necessary for a green environment practice campaign to all its citizens such as the acculturation of paperless practice.

Paperless practice has been given attention over the last three decades in line with the rapid development of information technology and communication (Shah & Tiwari, 2010). In conjunction with this, the use of various forms of information technology-based equipment began to evolve in the organization and many researchers have predicted the practice of paperless intensively began in 2000 and later (Andersen & Turner, 1994). It is technically supported by the use of electronic communications, data storage, transmission and data acceptance that lead to the transformation of tradition-based paper-based process practices to paperless. In the context of promoting a green environment for an organization, scholars have acknowledged that the approach to the paperless process provides its role in the form of its advantages / benefits such as work efficiency, high productivity, sustainable environment and profit generation.

Problem Statement

In general, studies have found that the practice of paper-based processes has some weaknesses. Paper-based processes involve the handling of physical documents, photocopies, archives, and retrieving physical documents from file cabinets (Kissell, 2013). The paper-based process is inefficient, involves the cost of office space, and poses a security risk (Selvi, Khan, Rani, Prasad, Paul, & Biswal, 2011). Kissell (2013) states that the filing system requires a significant amount of physical space and inefficiency in finding the previous paper filed. The average rental cost for physical filing space is estimated between 5 to 6 percent of the income for small and medium-sized companies, and large firms (Welsh, 2007). Organizations that use paper-based processes also face security risks as paper documents are lost, damaged, misplaced, or fall into the wrong hands (Mills-Senn, 2014). Brusco (2011) finds that "more and more organizations and organizations are shifting towards electronic filing because it saves space and improves security. Electronic filing makes the digital information easier to be searched and decrease the inefficiency of employee due to the removal work to find physical documents misplaced (Paperless Office, 2009).

Recognizing the shortcomings inherent in the paper-based process and the importance of adopting a paperless process approach particularly in this sophisticated information technology era, public universities have also taken the initiative to urge its staff to embrace paperless practices (Reaz, Hussain and Khadem, 2007). This call is in compliance with the requirements and targets of paperless initiatives in the Malaysian public sector ICT framework as set out in the Public Sector ICT Strategic Plan of Malaysia 2011-2015. This culture is appropriate when a university takes on the overall quality aspect and is in line with the status of an autonomous university that requires the operation efficiency in generating reasonable income and profit. Looking at current developments, the practices of this paperless need to be expanded and intensified by university staff especially from administrative staff and lecturers. This is because the level of paper usage in various processes based on administration, teaching and learning is high. Additionally, concerns arise if university staff are unwilling to fully utilize
the information and communication technology facilities that have the potential for paperless processes in their daily work activities. This is due to their lack of understanding, ability and

confidence in the use of such technology. So they are constantly using traditional methods and approaches. This scenario is in line with the issues inherent in the study of Barker, Fiedler and Johnson (2008) at Australian universities. In addition, the issue of university staff's intention towards paperless is also related to the question of Arzmi and Mohd Yahya (2013) on the extent to which academic staff in Malaysia is integrated with technology development as applied in e-journals and how much they desire and use e- journals in the effort to uphold the paperless process. The features of this problem can actually affect the government's desire for all public and private sector agencies including universities to support the transformation program towards the full implementation of electronic government (e-government) which is a platform for successful government paperless (Azman, 2012).

Hence, there is a need for constant awareness and desire among UA employees to practice the paperless process seriously and with integrity. In this regard, the need for a study and identification of factors that may influence the wishes of university employees to practice the paperless process. The literature review focuses on the discussion of identified factors from previous studies such as management support, support of existing information technology facilities and the influence of colleagues or co-workers. However, past studies on these factors are concentrated in the manufacturing and other services sectors. Studies in the higher education sector are more focused on technical discussions on paperless practices such as the development and operation of information technology system in paperless practices. Hence, in the development of the research model of desirability towards paperless and filling the gaps from previous studies, the three factors mentioned above will be utilized as a determinant factor to influence the intention towards paperless among employees in UA in Malaysia.

Literature review

Scholars certify that the practice of paperless can be reinforced through the support of information technology (IT) facilities. For example, the provision of modern and reliable IT tools and equipment such as the fiber optic cable for high speed internet access has become the basis of individual confidence building for a positive perception in implementing paperless based work.

Furthermore, the support of information technology personnel is also important in influencing individual perceptions of ease of use and technology (Mahmood and colleagues, 2001; Thatcher and colleagues., 2002). This is because IT staff provide employees in the form of support on how to use technology in less complex ways. Besides, they also explain the importance of technology that can benefit employees and organizations in general. Indirectly these IT staff who are co-workers in the organization either among of them or with individuals in other departments also play a role in motivating the practice of paperless operations in the organization.

While the direct support in the IT aspect is important to influence individual perceptions of the ease of use and use of technology, it is recognized that management support also serves to create conducive environment and towards the use of paperless offices. In fact,communication from management to create a broad understanding of the possible tasks and changes and the advantages of paperless offices with organizational goals is crucial to create positive perceptions of the easy use and usability of technology (Mahmood et al., 2001; Thatcher et al., 2002). This is reinforced in the initial opinion by Davies (1989) and later argument by Crespo et al. (2008) on individual perceptions of the simple use and usefulness of IT technology that directly affects the individual intentions or desires towards the use of paperless office. Therefore, this study found that the need for IT support, the

influence of IT staff and at the same time, the support of the management complementing the contributing factors on individual perceptions and desires for the paperless process.

Strengthening the individual's desire for paperless processes, the role of management support in formulating organizational policies in line with government policies is seen to be the effective mechanism. It combines government policies related to paperless government, green environment and public sector information technology with organizational policies in the aspects of information technology and green environments. Importantly, is the awareness and understanding of the staff on the existence of this policy and its implementation is seen to have an impact on the desire for paperless processes. This opinion is consistent with the results of the study and opinions by McLeod et al. (2004), Crown (2001) and Umi Asma 'and Zawiyah (2009) which clarify the government's recommendations through its policy that is integrated into the organization's policy pertaining the electronic records management system has affected the reduction of paper usage in the filing of organizational data. It is consistent with Umi Asma 'and Zawiyah (2009) who suggested that employees were motivated to implement this electronic record management system as a result of the initiative and a clear understanding of the enforced policies given by the senior authorities. \

Research Framework

This paper derives a research framework (See Figure 1) from the literature review as discussed above as well as from the theoretical model foundation in Technology Acceptance Model (TAM) by Davis (1989). Basically, TAM explains about the relationship between perception of the use of technology and behavioral intention. Perception of the use of technology can be influenced by various determinant factors such as perception of risk (Anna & Yusniza, 2010), perception of organizational policy and perception of organizational support. In some cases perception of the use of technology is associated closely in measuring the constructs that directly influence the behavioral intention. Thus, for this study the measurement of perception of the use of technology whether usefulness or ease of use of technology has been contained in the measurement of any related independent variable. For example, the item that relates to the ease of use of technology is possible to represent the item of IT support as illustrated in the Figure 1. Other independent variables used in the model are management support and peers support that may lead to intention towards paperless. Indeed, the measures of constructs that contain the element of the use of technology would give a positive impact on behavioral intention (Agarwal & Prasad, 1999; Venkatesh & Davis, 1996). From that, there are hypotheses could guide this study;

H1: There is a positive significant effect of IT support on intention towards paperless among the UA employees

H2: Management support positively and significantly affects intention towards paperless among the UA employees

H3: Peers support influence intention towards paperless among UA employees positively and significantly.

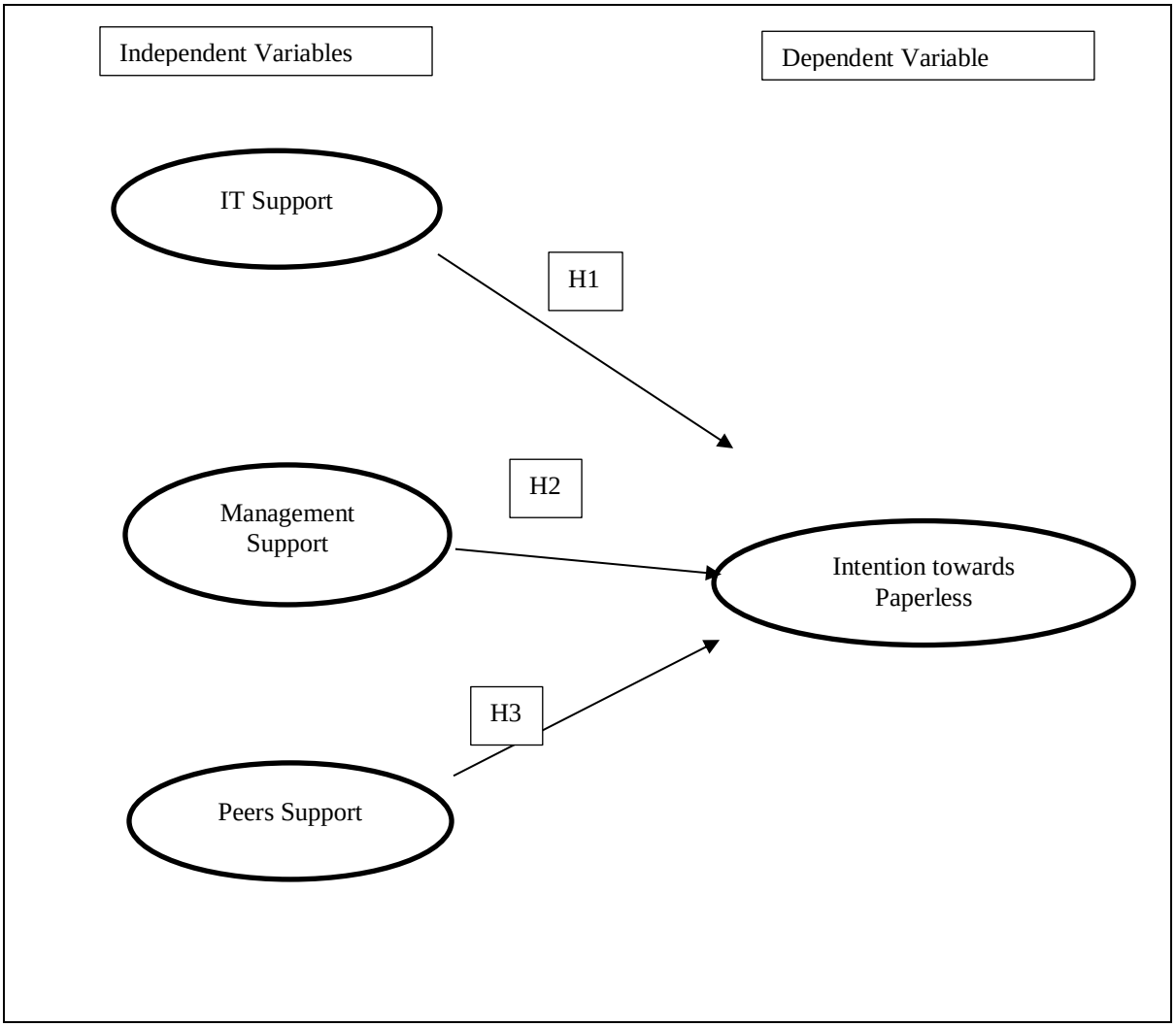

Figure 1: Research Framework

Conclusion and Future Research

The essence of organizational support to the intention towards paperless has been explained by the previous studies. This study takes the initiative to share insights into its dimensions (IT support, management support and peers support) and giving valuable input on the paperless practice by UA employees. It is expected that all three antecedent factors will have a positive and significant impact on intention towards paperless. This is because the supports given by these three parties depict the usefulness of technology and the ease of use of technology that make the employees feel comfortable and confident, thus, desire to practice paperless.

There are some potential usefulness of this study. First, providing more well equipped infrastructure for IT system in supporting paperless initiative. Second, exercising a real and practical management by example in encouraging the subordinates for paperless. Third, initiate the train of trainers among the co-workers for the sharing of the ease use of technology knowledge and skills with others. This study could also be extended to other respondents such as employees from other UAs for a better generalizability of findings. Huge number of respondents will generate more accurate perceptions in measuring the constructs

utilized in the model of study. Besides, it is suggested for investigating other determinant factors such as employees' trust and employees profile that could construct a close relationship with intention towards paperless in UAs.

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DOES THE DE-INDUSTRIALIZATION AND TERTIARIZATION PROCESS REDUCE THE CARBON EMISSIONS? NEW EVIDENCE OF DYNAMIC PANEL HETEROGENEITY IN ASIAN COUNTRIES

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Abstract: *To date, slowdown trends in the global CO_2 emissions registered in 2012 to 2015 argue due to the transformation from an industrial based on a less-energy intensive services oriented. Nevertheless, inconsistent and insufficient evidence of the role of sectoral composition in influencing the carbon emissions is a serious academic and policy gaps that were overlooked. Thus, due the fact that Asian countries experiences a dramatic shift in phases of economic structure, this study aim to investigate whether the de-industrialization and tertiarization process might be the solution to the carbon emissions in Asian countries. Due to the structural heterogeneity exists widely across countries in Asian countries, this paper employs Stochastic Impact by Regression on Population, Affluence, Technology (STRIPAT) model as its analytical framework and estimate using the Dynamic Common Correlated Effects (DCCE) estimator to address the heterogeneity, cross-section dependence, and dynamic nature of carbon emissions. In sum, this study found that the de-industrialization moderating the CO_2 emissions in Asian countries, while the expansion of service sector bound to reduce the CO_2 emissions as presented in quadratic functional. Nevertheless an N-shape relationship observe in cubic functional, thus there is no guarantee that long-term levels of pollution emissions will continue to fall as countries shifting to services-based economy. The finding of this study is important not only in term a value-added of current knowledge, but also in assisting the development of strategic planning and better sustainable policy to combat the growth of CO_2 emissions.*

Keywords: *Asian Countries; de-industrialization; tertiarization process; CO_2 emissions; STRIPAT; Dynamic Common Correlated Effects (DCCE)*

Introduction

Historically, the economic development not only accompanied with the switching from the agricultural sector to the manufacturing sector or known as the industrialization process, but also the transformation from industrial into services economy or known as tertiarization process (Kijima *et al*., 2010). Since the 19th century, the rapid growth of industrial sector in line with the expansion of energy-intensive activities that lead to greater pollution emissions (Poku, 2016). Interestingly, according to Marsiglio et al. (2016) the shrinking shares of manufacturing and simultaneously increase the share of the service sector will decrease the

rate of pollution emissions. Nevertheless, empirically studies that confirmed the tertiarization effect in lowering the pollution considers scarce.

In this field Asian countries are a primary candidate and the study on the role of sectoral composition in influencing the carbon emissions in the Asian country's merits investigation for three reasons. First, Asian countries experience a more rapid shift in economic structure compared to other regions and currently Asia takes the blamed as the main culprit for global carbon emission (Olivier et al., 2016). Second, the structural heterogeneity that exist in Asian countries as well as the cross-sectional dependence among Asian countries has been less considered by previous studies (Felipe et al., 2016). Second, by the year 2020, Asian countries aim to reduce the pollution emissions of the overall economy by 36-39 per cents, thus, a propose strategies to curb the pollution it is a serious academic and policy requirement.

The current study mainly provides three contributions, first, we adopt an alternative indicator as a proxy of affluence effect in the non-linear STRIPAT framework, namely, industrial and services value added. Moreover, the Kuznets theory of inverted U-shaped examine by the inclusion of quadratic and cubic term of both sectors to explain the CO_2 emissions which not existence in Asian countries studies. Second, to provide a more robust estimation and confront Econometrics problem such as indulgences, heterogeneity, and cross-country dependency, the this study opts the newly developed Dynamic Common Correlated Estimators of Chudik and Pesaran (2015). The employment of this estimator provides a novelty contribution as previous empirical works failed to consider the heterogeneity that exists among Asian countries. Third, this study also sheds light on the industrial and services effects on CO_2 emissions and provide a direction in preparing a workable policies to combat the pollution emissions. Thus, this study attempts to contribute to the empirical evidence by examining the expansion effects of industrial and service sector on the carbon emissions in the non-linear framework for 34 selected Asian countries from 1990 to 2016.

Further, the second section presents the review of several past empirical studies related this current study, the third section highlighted the model specification and proposed estimator, the fourth section exposes the empirical results and finding, and the last section discussion of the finding as well as conclusion.

A Brief Review of the Literature

Most studies in the field of sectoral composition and pollution nexus majority focused on industrialization effects. Cherniwchan (2012)for instance, adopted the simple two-sector model of neoclassical growth in a small open economy using sulphur emissions data for 157 countries over the period 1970-2000. His study concluded that the industry has positively influenced the emission changes where it empirically indicated that a 1 per cent raise in the industry's share of total output is associated with an 11 per cent rise in the level of pollution emissions. On the other hand, Alam (2015) found that the shift from the secondary to the tertiary sector does not lead to CO_2 emissions reduction rather increases with rising income. Meanwhile, Akin (2014) and Li et al. (2015) believed that the impact of industrialization varies with countries' income levels. Using the STIRPAT framework, they have found out that only in the middle and low-income group, industrialization process have a significant impact toward the CO_2 emissions, while industrialization have an insignificant impact on the high income group.

More recent study conducted by Sohag *et al*., (2017) examined the role of sector value addition to GDO on CO_2 emissions for middle income countries. They adopted heterogeneous panel estimators; the cross correlated effect mean group (CCEMG) and

augmented mean group (AMG) estimators that relax the assumption of cross-dependence and found out that the agriculture GDP and industrial GDP are positively related with CO_2 emissions. Nevertheless, services sector is positively related with CO_2 emissions in upper middle-income countries but negatively related with CO_2 emissions in lower middle income group. The moderating effect of services sector also found in Asian countries (Yassin & Aralas, 2017)

To date, studies that examine the nonlinear relationship between sectoral composition and pollution only is extremely limited. Based on our limited knowledge, only Taghvaee and Parsa (2015) extended the sectoral composition-pollution nexus in non-linear estimations for a single country, specifically Iran. In their study, is a clearly an N-shaped relationship between manufacturing-pollution nexus, as well as the services-pollution nexus.

In sum, although Sohag *et al*., (2017) overcome the problem of cross-sectional bias and consider heterogeneity, nevertheless the dynamic nature of CO_2 emissions as well as the non-linear relationship in been taken into consideration. Meanwhile, Taghavaee and Parsa (2015) have only limited into single country study. Thus, the global effect of CO_2 Emissions are not taken into account.

Model Construction and Data

This study estimates the sectoral effects of industrial and services on carbon emissions based on the Stochastic Impacts by Regression of Population, Affluence and Technology (STIRPAT) which extended from the IPAT equation by Ehrlich and Holdren (1971). The STIRPAT model specifies as below:

$$I_{it}=a_i P_{it}^b A_{it}^c T_{it}^d e_{it} \quad (1)$$

Where, I_{it} denoted the CO_2 emissions, P_t represent the population effects, A_t denoted the affluence effect, T_t represent the technological effect, and e_{it} is the error term. In panel setting, countries are denoted by the subscripts i (=*1,….,N*) and the subscripts t (t=1,….,T) represent the year; a_i denote the country-specific effect and e_{it} represents the random error term. This study decomposed the affluence effect which generally proxies by GDP per capita such as Sadorsky(2014) with two main sectors; Industrial and services value added. Taking natural logarithms of equation (1) with inclusion on square and cubic term of industrial value added provides a non-linear specification in dynamic panel and is designated as **Model 1.**

$$\mathrm{InCO2_{it}} = \beta_0 \mathrm{InCO2_{it-1}} + \beta_1 \mathrm{lnU_{it}} + \beta_2 \mathrm{Inindu_{it}} + \beta_3 \mathrm{lnindu_{it}}^2 + \beta_4 \mathrm{lnindu_{it}}^3 + + \beta_5 T_{it} + \lambda_i f_t + \varepsilon_{it} \quad (2)$$

We augment equation (2) with inclusion on square and cubic term of services value added provides a non-linear specification in dynamic panel which designated as **Model 2**.

$$\mathrm{InCO2_{it}} = \beta_0 \mathrm{InCO2_{it-1}} + \beta_1 \mathrm{lnU_{it}} + \beta_2 \mathrm{Inserv_{it}} + \beta_3 \mathrm{lnserv}^2 + \beta_4 \mathrm{lnserv_{it}}^3 + + \beta_5 T_{it} + \lambda_i f_t + \varepsilon_{it} \quad (3)$$

In model 1, the population effect proxy by shares of the urban population in second term expected to have a positive relationship with CO_2 emissions (Guo et al., 2016). The second, third, and fourth terms represent the industrial, square value of industrial, and cubic value of industrial value added. While the fifth terms term in both model represent the energy used per unit of output, or energy intensity as proxy for the technology (T) effect. It is expected that the energy intensity is positively influence the CO_2 emissions and enhancement in the

efficiency of energy use, it is expected to moderate the growth CO_2 emissions (Shahbaz et al., 2016). In model 2, the second, third, and fourth terms represent the services, square value of industrial, and cubic value of services value added. The industrialization expected to will increase the CO_2 emissions, while the teritarization may lower CO_2 emissions. Further, it is expected that the expansion of industrial sector will intensifies the carbon emissions, while the expansion of services sector will abating the carbon emissions (Alam, 2015). Due to the fact that the CO_2 emissions has a dynamic effects and heterogeneity across Asian countries, the above equations include a pervious value of CO_2 emissions and vector of slope coefficients as heterogeneous across N. Thus, the error term (e_{it}) capturing the unobserved country specific effect (f_t) that includes the individual heterogeneity factor loadings (λ_i) and the remaining disturbance term (ε_{it}).

This study opt the variables in two sources: first, the carbon emissions (CO_2) per capita in metric tons adopted from the Emissions Database for Global Atmospheric Research (EDGAR). Second, the independent variables decomposed into the three effects, namely affluence effect which decomposed into industrial[1] and service value added[2], population effect proxy by the share of urban population, and technology affect denoted by the energy intensity where it often expressed as total energy use per dollar income. All independent variable adopted from the World Development Indicator (2018) dataset from 1990 to 2016.

Dynamic Common Correlated Effects (DCCE)

To estimate both model, the employment of Dynamic Common Correlated Effects (DCCE) model developed by Chudik and Pesaran (2015) will address the unknown types of error cross section dependence due to the presence of common shocks, interdependencies such as trade activities, the heterogeneity among countries, and the endogeneity problem. According to Chudik and Pesaran, the estimator becomes more consistent if $\sqrt[3]{T}$ a lag of cross-section means is added. For a clear explanation, lets the model simplify as follow:

$$y_{it} = \alpha_i + \lambda_i y_{it-1} + \beta_i x_{it} + \sum_{l=0}^{pT} \delta'_{il\bar{z}_{t-1}} + \varepsilon_{it} \tag{4}$$

Where:

$\bar{z}_t = (\bar{y}_t, \bar{y}_{t-1}, \bar{x}_t)$

pT −The number of lags ($pT = \sqrt[3]{T}$)

λ_i − Individual heterogeneity factor loadings

β_i −The heterogeneous coefficient and randomly distribute around common mean, $\beta_i = \beta + \nu_i, \nu_i \sim IID(0, \Omega_V)$

From equation 4, λ_i and β_i are stacked into $\pi_i = (\lambda_{it}, \beta_i)$. The mean group coefficient estimates as in equation 5:

$$\hat{\pi}_{MG} = \frac{1}{N} \sum_{i=1}^{N} \hat{\pi}_i \tag{5}$$

[1] represents a country's industrial activities such as mining, quarrying, manufacturing, construction, and electricity, gas and water

[2] Represent a country's services activities such as transport, communications, retail trade, banking, insurance public administration, and others services

Where the $\hat{\pi}_i$ and $\hat{\pi}_{MG}$ are consistently estimated with convergence rate $\sqrt{N}$ if $(N, T, pT) \Rightarrow \infty$.
Under the full rank of factor loading, the asymptotic variance can be consistently estimated by:

$$Var(T_{MG}) = N^{-1}\hat{\sum}_{\pi} = \frac{1}{N(N-1)}\sum_{i=1}^{N}(\hat{\pi}_i - \hat{\pi}_{MG})(\hat{\pi}_i - \hat{\pi}_{MG})' \quad (6)$$

The mean group estimates have the following asymptotic distribution (Chudik & Pesaran, 2015):

$$\sqrt{N}(\hat{\pi}_{MG} - \pi) \xrightarrow{d} N(0, \sum\nolimits_{MG}) \quad (7)$$

To correct for small sample time series bias, the jackknife correction method and the recursive mean adjustment proposed by Chudik and Pesaran (2015a). The mean group estimate of the Jackknife bias-corrected CCE estimators as follow:

$$\hat{\pi}_{MG} = 2\hat{\pi}_{MG} - \frac{1}{2}(\hat{\pi}_{MG(a)} + \hat{\pi}_{MG(b)}) \quad (8)$$

Where,
$\hat{\pi}_{MG(a)}$ −Mean group estimate of the first half (t=$\frac{T}{2} + 1, \ldots, T$))
$\hat{\pi}_{MG(b)}$ − Mean group estimate of the second half (t=1… $\frac{T}{2}$)

The Mean Group estimate of the Jackknife derived from the variance of multiple Mean group estimate with the average value of the Mean Group Dynamic Common Correlated Effect estimations for the first half of the existing time period ($\hat{\pi}_{MG(a)}$) and the second half ($\hat{\pi}_{MG(b)}$). In this regression, the test for cross-sectional dependence (CD) devised by Chudic and Pesaran (2015) is included. The CD test under the decision of null hypothesis: the error term are weakly cross sectional dependent

Results

Initial step is to observed the trends that affected the data, using the Pesaran (2007) CIPS unit root test. The unit root test presented in table 1 shows that all are stationary for all series including with trends-stationary process. This results implied that any possible shock affecting the series is only a temporary effect. Hence, we proceed with the estimations.

Table 1: Panel Unit Roots Test based on Pesaran (2007)

Variable	CIPS	
	Without Trend	With Trend
InCO_2	-1.330**	-1.877**
$Urbanization(U)$	-2.222**	-1.964**
$Technology\ Effect\ (lnT)$	-2.117**	-2.819***
$Industrial\ Value\ Added\ (lnindu)$	-1.773**	-2.263***

$Services\ Value\ Added(lnser)$	-2.423***	-3.053***

Notes: CIPS test developed with the command of xtcips of stata 14 with 3 maximum lags; the critical value for CIPS statistics at (***) 1 percent, (**) 5 percent, and (*) 10 percent level. The null hypothesis is that the variable is homogeneous non-stationary.

The estimation results in table 2 focused the expansion industrialization effect on the CO_2 emissions in the STRIPAT non-linear model. At first, the lagged value of CO_2 emissions coefficients is positively associate with the current value of CO_2 emissions levels. Next, the estimated coefficient of industrial value added found positively affect the CO_2 emissions for all estimators and implied that a 1 per cent increase in industrial value added significantly increase the CO_2 emissions by 0.333 to 1.461 per cent. Further, as the industrial output expanded as proxy by square term of industrial value added, the CO_2 emissions intensifies by 0.1303 to 0.3920 per cent in 1 per cent increase of industrial value added. Further, at a more high industrial output, the $\mathrm{CO_2}$ emissions still intensifies and show that a 1 per cent increase in square term of industrial will increase the $\mathrm{CO_2}$ emissions by 0.0833 to 0.1122 per cent. The finding provides a monotonic linearity association between industrial and $\mathrm{CO_2}$ emissions.

On the other hand, the services output found to positively relate to $\mathrm{CO_2}$ emissions and indicated that an increase of 1 per cent of services value added will surge the $\mathrm{CO_2}$ emissions by 0.060 to 0.0855 per cent. Meanwhile, the urbanization and energy intensity are positively statistically significant in influencing the $\mathrm{CO_2}$ emissions. The results demonstrated that as share of urban population rise by 1 per cent, it will intensifies the $\mathrm{CO_2}$ emissions by 0.1618 to 0.1743 per cent and 1 per cent increase in energy intensity cause a hike by 0.1358 to 0.4211 per cent in the level of CO_2 emissions. The Jackknife bias correction and Recursive mean adjustment methods that consider the small sample size produce consistent results with the mean group-DCCE. Finally, the CD statistics shows that the result shows that error terms are weakly cross sectional dependence and the value of goodness-of-fit measures (R-square) for all model indicates the model explains approximately 79 to 83 per cent.

Table 2: Result of Heterogeneous Estimation for non-Linear Dynamic STRIPAT Model (Model 1) Dynamic Common Correlated Effects (DCCE)

	Mean Group (MG)	Jackknife Bias Correction	Recursive mean adjustment method
$\mathrm{lnCO2}_{\mathrm{it}-1}$	0.0526**	0.1023**	0.1191**
	(0.0784)	(0.0564)	(0.1810)
$lnindu$	1.4613**	0.8520**	0.3330**
	(1.494)	(0.4130)	0.1570
$lnser$	0.0060*	0.0070*	0.0855*
	(0.0049)	(0.0034)	(0.0876)
ln(Urban)	0.1928*	0.1743*	0.1618*
	(0.1240)	(0.1042)	(0.2643)
lnT	0.1358*	0.4211*	0.4735
	(0.2251)	(0.2222)	(0.2096)
$indu^2$	0.3920*	0.3430*	0.1303*
	(0.5627)	(1.2180)	(1.4440)
$indu^3$	0.1039*	0.1122*	0.0833*
	0.2266	(0.101)	(0.1230)
Cons	3.778	0.276	0.2881
	(0.631)	(0.443)	(0.4515)
R-squared	0.83	0.79	0.82
CD Statistic	-0.54	-0.25	-0.54
	(0.587)	(0.623)	(0.590)
Obs.	884	884	850

Notes: The dependent variable is the carbon dioxide emissions (CO_2). All variables are expressed in natural logarithm (ln). (*) significant at the 10 per cent level, (**) significant at the 5 per cent level, and (***) significant at the 1 per cent level. The analysis use dynamic common correlated effects estimation developed by Chudik and Pesaran(2015). Figure in parentheses are standard error, Cross Sectional Dependence (CD) test which is p-value and the null hypothesis is that the error terms are weakly cross sectional dependent.

Table 3 shows the inclusion of expansion effects of services value added proxies by the quadratic and cubic term of services value added on the CO_2 emissions. Initially, the services value added found to raise the CO_2 emissions. It is implied that 1 per cent of increase on services value added will increase the current CO_2 emissions by 0.4121 to 0.5907 per cent. At certain threshold, the CO_2 emissions diminishing as the services value added build-up as proxy by the quadratic term. This implied that at higher accumulation of services output, the

CO_2 emissions will decrease by 0.0813 to 0.0994 per cent. Nonetheless, the further increase of services output proxy by cubic term confirmed that will turn the CO_2 emissions to rise again. This results confirmed that there exist pattern with an N-shaped curvature between services output and CO_2 emissions. Referring to other determinants, the industrial output increase by 1 per cent, the CO_2 emissions rises by 0.6318 to 0.7442 per cent. Meanwhile, the urban population confirmed to significantly enlarge the CO_2 emissions. The technology effect proxy by the energy intensity and suggesting that consuming more energy per output will result in environmental pollution. The Jackknife bias correction and Recursive mean adjustment methods that consider the small sample size produce consistent results with the mean group-DCCE. Finally, the CD statistics show that the error terms are weakly cross sectional dependence and the value of goodness-of-fit measures (R-square) for all model indicates the model explains 53 to 76 per cent of the cross-country variation.

Table 3: Result of Heterogeneous Estimation for non-Linear Dynamic STRIPAT Model (Model 2)
Dynamic Common Correlated Effects (DCCE)

	Mean Group (MG)	Jackknife Bias Correction	Recursive mean adjustment method
$\mathrm{InCO2}_{\mathrm{it}-1}$	0.1007**	0.0714**	0.0663**
	(0.1038)	(0.1620)	(0.1340)
$lnindu$	0.7442*	0.7918*	0.6318*
	(0.5072)	(0.6666)	(0.8275)
$lnser$	0.4121*	0.5840*	0.5907*
	(4.146)	(0.1303)	(0.0499)
ln(Urban)	2.3535**	1.5110**	1.0050**
	(1.899)	(0.766)	(1.8200)
lnT	0.2229	0.6234	0.3031
	(0.2787)	(0.8730)	(0.1419)
$serv^2$	-0.0813*	-0.0961*	-0.0994*
	2.138	(1.324)	(8.694)
$serv^3$	0.0047*	0.0091*	0.0061*
	(9.547)	(0.0026)	(0.2833)
Const	45.80**	49.107 **	0.8731**
	(22.8)	(18.35)	(0.3789)
R-squared	0.70	0.53	0.76
	-2.24	-0.97	-1.16
CD Statistic	(0.025)	(0.33.1)	(0.2442)
Obs.	884	884	850

Notes: The dependent variable is the carbon dioxide emissions (CO2). All variables are expressed in natural logarithm (ln). (*) significant at the 10 per cent level, (**) significant at the 5 per cent level, and (***) significant at the 1 per cent level.

The analysis use dynamic common correlated effects estimation developed by Chudik and Pesaran(2015). Figure in parentheses are standard error, Cross Sectional Dependence (CD) test which is p-value and the null hypothesis is that the error terms are weakly cross sectional dependent.

Conclusion

This study provides an empirical evidences on the roles of industrial and services sectors in influencing the CO_2 emissions. Specifically, this research aims to assess whether the de-industrialization and the movement of services sector can become the solution of environmental problem in Asian countries. This study employs the non-linear STRIPAT model as its analytical framework and estimates the model using the Dynamic Common Correlated Effects (DCEE) estimators which accounts for heterogeneity across countries.

In this study, we disentangle the affluence effects into different sectoral compositions which proxies by industry and services value added. In the first stage, the industrial and services sector found to have a positive effect the carbon emissions in Asian Countries. Alternatively, the industrial sectors of the economy is contributing greatly to carbon emissions compare to the services sectors which slightly different compared to the recent study by Sohag *et al*., (2017) which argue that the services sector has a greater impact on carbon emissions compare to other sectors. Further, with the inclusion of quadratic and cubic terms of industrial output in model 1, it provides the possibility of a non-linear. However, the result found that the positive impact of industrial output on CO_2 emissions is permanent. On the other hand, the inclusion of the square term of services, value added confirmed the inverted-U shaped relationship between the services value added and CO_2 emissions, but at certain threshold, finally the CO_2 emissions will bounce back as the shares of services sector enlarge. The possible explanations of the results that the expansion of services sector may enlarge the environmental-friendly services based activities. For instance the eco-tourism and conservations as subsectors of services (Prieur, 2009). Nonetheless, improper planning in the service sector with less emphasis on the employment of clean environment will only intensify the pollution emissions later (Effiong, 2018). Moreover, according to Clemes et al. (2003), as the services sector expands, it will encourages the expansion on the industrial sectors as well as the agriculture sector. Turning to the urbanization effect on CO_2 emissions, according to Wang et al. (2017) the growth in urbanization in Asian Countries contributes to the pollution intensify due to the vast uses of energy, vehicles, and constructions that emitted emissions. The findings of this study are consistent with Poumanyvong and Kaneko (2010) and Wang *et al*., (2016). Next, similar to the previous studies such as Ameer and Munir (2016), the technology effect proxy by energy intensity is positively related with CO_2 emissions, thus implied that the environmental degradation will become worse, if the economic activities are energy-inefficient

Several policy implications were identified through this study. First, Asian Countries unable to reduce its carbon emissions if focusing with the conventional industrial production. According to Lu *et al*., (2015), the industrial sector should reduce the size of the most pollution industrial sub-sectors. Second, the inverted U-shaped between services sector and carbon emissions suggested that Asian countries with a lower level of services share should speed up the process of tertiarization, however, is should be accompanied with a strategic planning on managing the long-term effects of services sectors and sustainable solution to environmental pollution. Third, policy maker should take extra attention to the over-concentration in the largest city, thus, a proper design and planning for sustainable lifestyles for urban population is needed in Asian countries and encourage the development activities that not only contributes to the economic growth but also reducing the carbon footprint such as eco-tourism and renewable energy consumption in long-run. Fourth, continuous effort in

discouraging the high energy extensive-activities and shift to much more eco-friendly need to be done by imposing to the price of carbon emissions either through taxes of cap as proposed by several studies such as (Sadorsky, 2014).

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SUCCESSFUL CIRM SYSTEMS IMPLEMENTATION IN LOCAL GOVERNMENTS IN LABUAN, MALAYSIA: PERSPECTIVE OF SYSTEM DEVELOPERS

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Abstract :*Citizen Relationship Management (CiRM) systems have been an essential information systems (IS) strategy in building a relationship between the government and the public. This is particularly in developing nations, where successful implementation of CiRM systems offer vast benefits, such as improving quality service delivery, sharing information effectively, easing operation procedure, and providing long-term cost-effectiveness. In order to determine the vital factors for the development in East Malaysia, evaluation of several organisational determinants that may affect the implementation of CiRM system was carried out from the stance of the system developers. In precise, this paper presents the pilot study conducted in Labuan Corporation. In-depth interviews with two system developers in the organisation provides the insights to identify the determinants to success the CiRM systems in local government Sabah before the actual case studies analysis conducted with the Sabah local government.*

Keywords: *Citizen Relationship Management (CiRM, CiRM Systems, Developing Coutries, Local Government, System Developer.*

Introduction

The global digital technology is seamlessly integrated into the daily lives of the public, especially amidst developed nations. The United States (US), the United Kingdom (UK), and the Republic of Korea have implemented e-governance initiatives such as Citizen Relationship Management (CiRM) systems and have been recorded to attain a level of maturity in their e-government transactional phase (Al-Khouri, 2011). CiRM is a customer-centric approach that has often been employed in non-profitable organisations. The surging concern amidst the government towards enhancing positive citizen relationship via systems implementation to satisfy its citizens is prevalent (Collins & Kim, 2009). Malaysia is not exceptional in this scenario. In particular, satisfying the citizens is the main reason for implementing CiRM systems amongst the local governments. For instance, electronic submission of taxes, complaints, and fines is just a few clicks away without the limitation of geographical locations. Some studies on CiRM systems that have been conducted within the Malaysian context mainly focused on Peninsular Malaysia. Nonetheless, the determinants for successful implementation of the system in the eastern states may differ from those identified in the peninsular. Shedding light upon the importance of implementing CiRM systems amongst the local governance of Malaysia is also deemed to benefit the local governments in

Borneo through its related guidelines. Thus, this pilot studies looked into the determinants of successful CiRM systems implementation, as well as the glitches within the systems.

The Significance of Looking through the Lens of System Developers

It is significant to incorporate the system developers' perspective they have deeper understanding and more familiarity with the system they have built, thus possessing the capability of applying adequate domain knowledge in the processes. Furthermore, they are well in-advanced in their field. As a result, they would be able to assist in moulding a high-tech public. System developers also have vital roles in guiding project managers and convincing the higher management to implement the CiRM systems.

Literature Review

The Present State of CiRM Implementation in Local Governments at Developed and Developing Countries

Developed nations, such as the United States, the United Kingdom, and Singapore, have implemented CiRM systems to support their daily Government-to-Citizen (G2C) activities (Al-Khouri, 2011). In the USA, CiRM system 311 has archived success by providing a wide range of government services using multi-channel communication systems (Hartmann, Mainka, & Stock, 2017). Apart from the US, the Australian government has reinforced an electronic platform with online services (Grönlund, 2010). Meanwhile, the government of Wales and England website has provided the public services and information with the digital access (Strielkowski, Gryshova, & Kalyugina, 2017). However, many developing nations have devised their e-government strategy based on successful cases of developed countries as the model. For instance, Tehran in Iran has recently begun applying data mining tools to determine the needs of their citizens (Bakırlı et al., 2012). India has adopted the ICT in its governmental organisation. Focusing on CiRM systems in management not only helps a nation in growing its market, but also enhances service delivery by the local governments.

The Present State of CiRM Implementation in Malaysian Local Governments

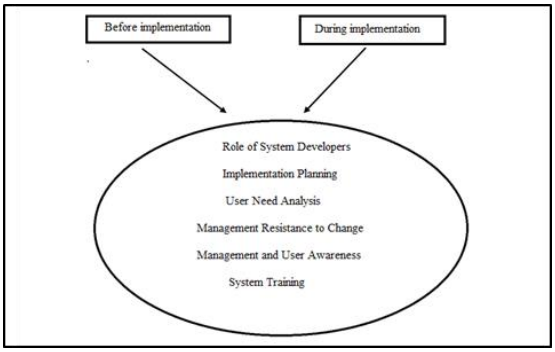
Malaysia is a developing nation that has positioned itself towards attaining the status of a developed nation in its Vision 2020. CiRM systems in Malaysia have been implemented at the local government level as a part of e-government initiative (Bahar et al., 2015). Critiques and complaints have escalated due to the poor services provided by local governments to the public (Kaliannan et al., 2009; Hashim, 2010). As a result, the general public has lost confidence in the government when a gap exists between 'demand' and 'supply' for local government service delivery. Several studies associated to CRM and CiRM in local governments have been carried out within the context of Malaysia, for example, cases at Kuala Lumpur City Hall (DBKL) and Petaling Jaya City Council (MBPJH). However, local governments in Sabah are in the midst of changing their system from manual to CiRM systems. Sabah is one the state in Malaysia, with a 3.86 million population. In Borneo Malaysia, none of the prior studies in implementing CiRM systems have incorporated the context of East Malaysia. Although Malaysia has been ranked as the top 20 out of 144 countries for IT readiness (Siddiquee, 2013), it is divided into West and East Malaysia. As mentioned earlier, the environment factor is accountable as a factor in determining network readiness. The environment and network readiness in Sabah is varied compared to the peninsular. Hence, it is emphasised here that the successful determinants in implementing CiRM systems at the peninsular may differ from those required in Sabah.

Proposed Theoretical Model

Based upon the literature, several determinants have evolved and is believed to have influenced the implementation. The determinants are implementation planning, user needs analysis, system developers' resistance to change, management, user awareness, and system training.

Figure 1 illustrates the proposed theoretical model of the studies, followed by a description of the determinants that are interrelated to one another.

Figure 1: The Proposed Theoretical Framework



Implementation Planning

Implementation planning involves a huge investment of time. Effective implementation planning is vital as this phase includes technology, design planning, and strategic use in system implementation. However, some issues such as consistency of application, security of online transaction, and integration of functional departments must be addressed prior to implementation (Tan, Benbasat, & Cenfetelli, 2013).

User Needs Analysis

Understanding both internal and external demands of a user is vital to offer fulfilling and satisfying services to the public. Observing the environment, as well as understanding the demands and needs of the citizens, can be useful for system developers in building a better functioning system (Bahari, 2012). It tends to serve as a guideline for the system developers in designing an effective system (Law, van Schaik, & Roto, 2014). Identifying the public needs and interests determines the most sought services. Thus, the processes of planning, developing, and testing are important in meeting user needs and demands.

Management Resistance to Change

The resistance usually happens at the early stages of the lifecycle and during the transitional period. Senior managers who are unfamiliar with the system have caused the funding for CiRM project implementation to be rejected (Bahar et al., 2015). As a consequence, the system developer has an important role to bring about awareness of the CiRM system by explaining its vast benefits. Management seemed reluctant to learn new technologies due to the false perception of their jobs being cut back (Bahari, 2012). Implementation activities with involvement of staff during the implementation phase can reduce the level of management resistance to change (Rose & Gerald, 2010).

System Developer's Awareness

Awareness can be described as an individual's consciousness, alertness, and attention on the issue subjected (NIST, 2013). In the early phase of implementation, system developer's awareness and support is important (Kendall & Kendall, 2014). According to Bahari (2012), the positive force come from them when they are aware of and understands the benefits of the CiRM systems. Only then the project is given top priority.

CiRM Systems Training

System training is useful and important for successful CiRM systems implementation. System developers have to ensure that a proper training process is in place to educate the user with the implementation of the system. This refers to specific knowledge, skills, and attitudes that encompass a level of training for users (Buckley & Caple, 2009). Systems training is useful to overcome the limitation of knowledge and skills during the CiRM system implementation (Schoenfeld et al., 2014). Thus, failure in planning the training and education programmes can critically affect the implementation of CiRM system.

Research Methodology

The research design follows the case study research design as suggested by Yin (2013), along with content analysis to improve the validity and evaluate the determinants from a different stance. This research design was selected because it helps in identifying the determinants by providing in-depth understanding regarding CiRM systems implementation process. The in-depth interview sessions allowed the system developers to share their knowledge and experiences, which appeared to be a great opportunity to discuss the present IS implementation in East Malaysia. The interview sessions were recorded and transcribed. After that, the data were categorised and compared via content analysis. The sampling design used was the purposive sampling technique. The reason for using this technique was due to the study's targeted local government with implemented CiRM systems. However, not all fulfilled the required criteria. Hence, the available samples were rather limited for investigation.

Pilot Study

A pilot study provides valuable insights for researchers. It also helped in predicting the successful determinants of the CiRM systems and in further understanding them within the context of Sabah based on prior determinants, besides refining the proposed theoretical framework derived from the literature review. Data gathered from the selected informants regarding the present CiRM systems can lead to improvisation or understanding of the CiRM systems. A pilot study is a small-scale research that examines the feasibility of the full-scale research in terms of time, cost, adverse events, effectiveness, and appropriateness of the preliminary steps prior to the real research (Hulley, Cummings, Browner, Grady, & Newman, 2013).

Case: Labuan Corporation *(Perbadanan Labuan)*

The case study research design (Yin, 2013) was employed in Labuan Corporation as the case for the pilot study to gather valuable insights. Labuan Corporation is located at the town of Labuan FT (see Table 4.1). The selection of informants was based on non-probability

sampling technique. Content Analysis was applied in the in-depth face-to-face interview sessions to encapsulate the provided responses.

Table 4.1 Pilot study informants

Place	System Developer Position
Labuan Corporation	Director of ICT (System developer)
	Assistant Director of ICT (System developer)

The Department of IT of the Labuan Corporation (Perbadanan Labuan) has implemented the CiRM systems since five years ago. Presently, they are involved in an upgrading process to enhance the functionality of the systems. The CiRM systems have been implemented under e-services for compound payments, and complaints making. The successful determinants in implementing the CiRM systems in Labuan Corporation were determined after interviewing the two main system developers.

The successful implementation of CiRM systems are listed in Table 4.2. The symbol "√" indicates crucial determinants, while "x" denotes those that were irrelevant.

Table 4.2: Determinants that influence successful CiRM systems implemented in Labuan Corporation.

No.	Determinants	
1.	Implementation planning	√
2.	User needs analysis (user and citizen)	√
3.	The role of the system developers	√
4.	Resistance to change (management and user)	√
	Resistance to change (user)	x
5.	CiRM systems training	√
6.	Awareness (system developer, management and users)	√
	Awareness (citizen)	x
7.	Resources sustainability	x

Content Analysis

The Roles of the System Developers

The roles of the system developers in Labuan Corporation (LC) included monitoring the system implementation from the beginning until the CiRM systems run correctly. They were directly involved in the implementation planning and deal with all the uncertainties (i.e.: arranging tasks from the beginning until the end to ensure the system functions well). The system developers in LC were highly aware of the system implementation and always encourage their staffs in adapting the CiRM systems. Overall, the system developer was the mastermind of the CiRM implementation initiative.

Implementation Planning

Implementation planning was essential as it serves as a proper planning to ensure that the new features of the systems can deliver better services to the Labuan citizens. In Labuan Corporation, system developers were concerned in choosing the service delivery channel, as the result of R&D shows that citizens still prefer the conventional approach face-to-face dealing, i.e.: The citizens in rural areas and senior citizens prefer going to the counter, while the citizens in town and youngsters prefer to use this system. Hence, to stay connected with the citizens, Labuan Corporation has implemented multi-channel delivery systems. In this scenario, Labuan Corporation has to plan their budget accordingly to ensure that all the

systems were improved. The features of the CiRM systems were determined during implementation planning. This was done after weighing in the benefits for the future generation.

CiRM Systems Training (staff and citizen)

System training was integral in developing the systems, inadequate staff and incompetent knowledge were the issues faced by the Labuan Corporation. The system developers claimed that they have troubles with staff who lack of knowledge, especially when it came to technical expertise. Well-trained or experienced staff can help to resolve glitches that may occur in the CiRM systems. One who was well-trained can operate the systems perfectly and offer effective suggestions to the citizens. Presently, training programmes were limited at the Labuan Corporation. There are no specific training programmes provided by the LC, as they need to apply for a training approval. Indirectly, it has limits the information from reaching the citizens and hampers awareness among the citizens. Besides, none of the CiRM system training has been carried out for citizens.

Resistance to Change (citizen)

Resistance to change amongst system developers and at the management level were unfelt. On the contrary, LC seldom received feedback requested for the system. As for complaints, the citizens preferred calling or dealing face-to-face. Several determinants seemed to lie at the root of the resistance to change. This may also be associated with the distance to the corporation, which is located in the heart of Labuan and easily accessed. As for making complaints, the Labuan citizens preferred to call in than submitting via online. This portrayed that the level of acceptance amongst its citizens was low.

User Needs Analysis

At Labuan Corporation, the system developers have analysed the needs and demands of its citizens in a timely manner by going through the complaints and feedback. The federal government required a system update at least once in less than five years. The system developers in LC are concerned on the changes taking place in the IT environment. Although the citizens in Labuan seemed to lack awareness regarding CiRM systems, the local government has continued to implement the systems to ease those who preferred online transactions.

Management and Public Awareness

High awareness was noted amongst the management because the research mostly involved the ICT team. The management has been introduced to the system and significance. Besides, in Labuan Corporation, the system developers were highly aware about the importance of CiRM systems. Regardless of the resistance to change among the citizens, system developers strongly thought that improvement was needed to ensure competitiveness. They always kept track of the emerging trends. Other than that, **awareness amongst citizens** was crucial for the success of the CiRM systems. However, the citizens appeared to be lack of awareness regarding CiRM systems. Therefore, awareness must be raised by employing several methods (such as roadshows, advertisements on LED boards, family day, or customer day, etc.) to promote the CiRM systems and ensure vast exposure to the Labuan citizens.

Resource Constraints

The limited budget adds a constraint on the implementation of CiRM systems. As a result, the project was implemented in plrases or postponed to the following year. Full support given by

the senior management also would not guarantee the required financial aid needed to upgrade the CiRM systems. Labuan Corporation was not dependent on government financial aids, as it has its internal funds from taxation. However, reduction in budget has indirectly affected the systems' quality. Several programmes have been planned by the Labuan Corporation, but the ICT department was waiting for the budget to implement them. However, human resources constraint was part of the glitches in CiRM system implementation. The user in LC is inadequate to support the CiRM systems.

Priority of the State Government (Infrastructure)

In comparison to Peninsular Malaysia, Labuan was still in its early phase of Unifi installation. However, Labuan is different mainly because Labuan was a duty-free island and was controlled by the Ministry of Federal Territories. Thus, its infrastructure was better upgraded than those found in the rural areas of Sabah. In addition, the priority that Labuan Corporation has given to the ICT department was as essential as other departments.

Geographical and Environment Coverage by the Local Governments

The small geographic coverage was one of the determinants that made the citizen reluctant to use the CiRM systems. The strategic location of Labuan Corporation office has eased the public in dealing with them. The citizen preferred to manually deal with the local government because its location was accessible. Besides that, the traffic congestion was not like in West Malaysia.

New Theoretical Underpinning

Figure 4.1 The redefined theoretical underpin of successful implementation of CiRM systems in local government at Sabah

Discussion and Conclusion

This pilot studies had further identified the diterminants for sucessful implementations as the CiRM system. The newly found determinants of successful implementations the role of systems developers, implementations planning, CiRM system training (user and citizen) and awareness among, the system developer management user and citizen. The challenges such as infrastructure levels resource constraints and resistance to change among need to be overcome.

Geographical coverage of local government in Labuan was part of the outcomes that influences the usage of CiRM systems. Multi-channel CiRM system were employed in Labuan Corporation based on citizens preference. This was because the Labuan people are

more familiar and comfortable with the conventional way in dealing with the government (face to face). Besides, the resistance can be related to computer and internet adoption in every household. Some household, do not have access to the internet. Additionally, the UTC that was located at the centre of the market eases its citizen to gain services from the local government (eg : pay compound, tax and other application). Hence awareness should be brought to the level of the citizens via training classes in using the system. They may be clueless about its functions and the benefit. The system has already been implemented, many do not utilise it. Multichannel CiRM system were employed in Labuan Corporation based on citizens preferences. Although there were some limitations in this paper, it has given the researcher insight regarding the determinants of success for the CiRM system in Sabah Malaysia. Therefore, the redefined theoretical framework wil be used as the guidelines for actual case studies in Sabah.

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INFLUENTIAL FACTORS ON STUDENTS' INTEREST IN LEARNING MATHEMATICS: LECTURERS' PERSPECTIVE

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Abstract: *Students' interest towards Mathematics will influence their performance in Mathematics. This primary study was conducted in order to find the effective factors to increase students' interest in Mathematics. The study was conducted by distributing the finalized questionnaires to Mathematics lecturers at Universiti Teknologi Mara (UiTM) Sarawak as target respondents. The results were examined by using independent t-test. From the evaluation of the questionnaires, the feedback from the respondents showed that having one of the family members with a degree in one of sub-branches of Mathematics, direct contact between students' family and Mathematics lecturers, the size and appearance of Mathematics book, and learning the Mathematical history give slightly significant in encouraging students' interest in Mathematics. However, factors such as the educational level of parents, the educational climate of Mathematics classroom, having activities outside the classroom, the peers influence, the behaviour of previous Mathematics teachers, conducting research (i.e. related to Mathematics, its application in daily life and other courses), and giving workshop/talk regarding Mathematics give more significant influence in increasing students' interest towards Mathematics.*

Keywords: *Mathematics, questionnaires independent-test*

Introduction

'Interest' is the most important thing to encourage people to do something (Judith & Chris, 2009). If people do something with interest, the work can be done in a very good manner. Hidi (1990) stated that being interested in a topic is a mental resource to enhance learning process, which then leads to better performance and achievement. Therefore, students must have the interest to study in learning process. Simultaneously to active learning, students must be interested to learn the subject taken to help them understand more (Shabani, 2006; Khayati & Payan, 2014). There are students who are very weak in calculations especially when the calculations involved with algebraic expressions.

The poor performance of the students in Mathematics is probably caused by teachers as one of the factor; however, the students themselves can also become the factor (Sa'ad, Adamu, & Sadiq, 2010). The teachers may be lack of teaching skills while the students may not perform enough exercises or they presumably do not understand the importance and the application of Mathematics in daily life. Therefore, it becomes one of the factors which influence the students' interest in Mathematics. They have negative mindset already when hear about Mathematics. They already think that Mathematics is a difficult subject and yet this default mindset is very hard to understand of why it occurs among students (Jameel & Ali, 2016).

As we know, Mathematics is widely used in all areas in the world. Mathematics is a knowledge which is very important and useful in our everyday life.

There are several factors that can be taken into consideration to make students become interested in Mathematics subject. There are some factors that will give big impact on students' interest in Mathematics. Therefore, it is very important to identify all the factors which can improve the students' interest towards Mathematics. The lecturers or the teachers have to recognize the most effective factors that can contribute to increase the students' interest in Mathematics.

Khayati and Payan (2014) had investigated the effective factors to increase the students' interest in Mathematics. From their research, they have taken 15 factors into their consideration to increase the students' interest in Mathematics. The factors that influenced students interest towards Mathematics included having one of the family members with a degree in one of sub-branches of Mathematics, direct contact between students' family and Mathematics lecturers, the educational level of parents, the size and appearance of Mathematics book, and learning the Mathematical history that give slightly significant in encouraging students' interest in Mathematics, the educational climate of Mathematics classroom, having activities outside the classroom, the peers influence, the impact of previous Mathematics teachers' behaviours, conducting research (i.e. related to Mathematics, its application in daily life and other courses), and giving workshop/talk regarding Mathematics which can give more significance in increasing students' interest towards Mathematics.

Many researches had been done on the factors which contribute to the interest of students in elementary school level (Khayati & Payan, 2014). But there are also few studies done on the higher school level. Khayati and Payan (2014) also agree that the students, who cannot understand Mathematics at primary or secondary level, will carry their Mathematical difficulties until their higher level of study. This current study will focus on the effective factors that can increase the students' interest in Mathematics from the perspectives of Mathematics lecturer at UiTM Sarawak. This study is employing the method used in Khayati and Payan (2014) as the guidelines. The objectives of this study are to find the effective factors in order to increase students' interest in Mathematics in order to increase the students' interest in Mathematics. The objectives of this study are very important to improve the students' results in Mathematics.

Literature review

Nouri (2008) used various interesting Mathematics teaching methods such as using games and play, poetry and drama to solve the Mathematical issues (Khayati and Payan, 2014). Nouri also concluded that these methods are able to strengthen the students' skill and make the students becoming active learners which could improve their progress in Mathematics. Zare (2012) in a study mentioned that the students' interest towards Mathematics can be doubled by using the suitable approach which appropriate to the purpose of every lesson (Khayati & Payan, 2014). The learning process can be supported by auditory and visual memory, and fostering students' precision and attention in the form of purposeful games. Rezvani (2008) who found that by making students fresh and happy, this learning situation could make students interested in studying Mathematics (Khayati & Payan, 2014). This can be done in many ways such as exercising good morality, practising appropriate behaviour of teachers, performing of simple sports in the classroom, and playing group games.

There are few researches that found that family background and the parents' relationship with school also influenced the students' interest toward Mathematics. Mohammadi (2009) found that students' interest in Mathematics can be increased if the

teacher and the parents cooperate to identify educational and behavioural problems among students in Mathematics (Khayati & Payan, 2014). Mirbalooch Zehi (2013) in a study also concludes that the relationship between family and schools could influence the students' creativity in Mathematics (Khayati and Payan, 2014). In the year of 2012, Ebrahimi found that the parents' educational level also gives an impact on students' performance in Mathematics (Khayati & Payan, 2014). Parents' socio-economic status, educational level, involvement and attitudes also give big impacts on the educational performance of students (Zehi, 2013; Khayati & Payan, 2014).

Teachers also have a very important role to increase students' interest in Mathematics. It is very important to ensure that the students are engaged to the learning process (Nyman, 2015). Interest and engagement are seen as important for learning process (Harris, 2011). The teacher must have interest in teaching and in Mathematics subject itself, as well as the teachers must conduct some activities to attract students in learning process (Joosha'ei, 2008; Khayati & Payan, 2014). The teaching methods used by the teachers and their attitude had great impacts on educational achievement of students (Moqadam, 2012; Khayati & Payan, 2014).

Methodology

This study will use basic statistical technique to obtain the result. The questionnaire will be distributed to all Mathematics lecturers in UiTM Sarawak. The questionnaire (Refer Appendix 1) was adopted from Khayati and Payan (2014) as the reliability of the questionnaire was confirmed using Cronbach's Alpha. In this paper, we replaced questionnaire item 10 from Khayati and Payan (2014) with different question which is to find the impact of giving workshop or talk regarding Mathematics in increasing students' interests in Mathematics. The reason of having this different question for questionnaire item 10 is because in UiTM Sarawak, the workshops have been done every semester for weak students. On the other hand, we also add questionnaire item 11 to evaluate the impact of increasing students' interests in Mathematics that will influence their Mathematics examination result in the opinions of Mathematics lecturer in UiTM Sarawak. The answer in the questionnaire will be using Likert Scale from the range of Strongly disagree (for much unrelated answer) to Strongly agree (for much related answer).

The questionnaires were distributed to all Mathematics lecturers in UiTM Sarawak (both UiTM Sarawak Kota Samarahan Campus and UiTM Sarawak Mukah Campus). The numbers or participants includes all permanent Mathematics lecturers, all contract Mathematics lecturers and all part time Mathematics lecturers as the sample.

Results and discussions

Part A (Lecturer's Information)

As the results, out of 24 Mathematics lecturer in UiTM Sarawak (excluding lecturers who are on maternity leave and study leave), there are 21 lecturers responded to the questionnaire. The information on the highest qualification of the lecturers, the information on the current level of teaching of the lecturers, and the information on the working experience in UiTM of the lecturers were represented in Table 1, Table 2, and Table 3 respectively.

Table 1: Information on the highest qualification of the lecturers:

Highest qualification	Number of respondents
PhD	3
Master	18
Bachelor	0

Table 2: Information on the current level of teaching of the lecturers:

Current level of teaching	Number of respondents
Pre-Diploma	8
Diploma	20
Bachelor Degree	2
Master Degree	0
PhD Degree	0

Table 3: Information on the working experience in UiTM of the lecturers.

Working experience in UiTM	Number of respondents
1-3 years	2
4-6 years	5
7-9 years	5
10-12 years	4
13-15 years	3
>16 years	2

Part B (Lecturer's Opinions)

The number of respondents who answered the questions in the scale Strongly agree (SA), Agree (A), Neutral (N), Disagree (D) or Strongly Disagree (SD) as well as the results for mode and the median was simplified as Table 4. From modal value in Table 4, by referring to Research Question 11, the respondents also strongly agreed that the interest towards Mathematics will influence the students' performance in Mathematics. The respondents strongly agreed that the parents' education influenced the students' interest in Mathematics. The respondents also strongly agreed that the interest towards Mathematics will influence the students' performance in the subject. Nine of the respondents agreed while the other nine respondents moderately agreed that having one of the family members who has had a degree in one of the sub-branches of Mathematics will influence students' interest towards Mathematics. The relationship between family members and lecturers, appearance of Mathematics text book, and studying the Mathematical history show moderate significance to increase the students' interest. The rest of the factors were agreed by the respondents to be the effective factors which highly influenced the students' interest to learn Mathematics.

As for the median results, half of the respondents strongly agree that the interest towards Mathematics will influence the students' performance in Mathematics. Half of the respondents decided that the relationship between family members and lecturers, the appearance of Mathematics text book, and studying the Mathematical history show moderate significance to increase the students' interest. And for the rest of the factors, half of the respondents strongly agree that the factors are highly effective to increase the students' interest towards Mathematics.

Table 4: The numbers of respondents answer the respective questions, the mode and the median.

Questions		VH	H	M	L	VL	MODE	MEDIAN
1	**a**	8	7	3	3	0	SA	A
	b	2	9	9	1	0	A, N	A
	c	1	4	12	4	0	N	N
2	**a**	6	10	5	0	0	A	A
	b	3	10	8	0	0	A	A
3		4	16	1	0	0	A	A
4	**a**	6	10	4	1	0	A	A
	b	8	12	1	0	0	A	A
	c	10	11	0	0	0	A	A
5		1	5	10	4	0	N	N
6		6	13	2	0	0	A	A
7		9	10	2	0	0	A	A
8		5	13	3	0	0	A	A
9		1	8	11	0	1	N	N
10		5	13	2	1	0	A	A
11		13	8	0	0	0	SA	SA

The results in Table 4 were represented in Likert scale form. In order to conduct the independent t-test, the Likert scale will be replaced with numbers where SA=5, A=4, N=3, D=2, and SD=1. The estimated mean $(\bar{x})$, the standard deviation (s), the hypothesis mean (μ_0), the t-value (t), degree of freedom (df), and the significance (p) were represented in Table 5. Using significant level *p<0.01*, the value of *p* has been calculated based on *t-value*, whereas *t-value* has been calculated based on value of estimated mean $(\bar{x})$, standard deviation (s), and hypothesis mean (μ_0) using usual independent *t-test* formula as follows;

$$t = \frac{\bar{x} - \mu_0}{s/\sqrt{df}}$$

Based on the results represented in Table 5, there are three questions in the questionnaire that were not significant where *p-value* were more than 0.01. From the *p-value*, the direct contact between parents and lecturers asking for their children's educational status, the size and the appearance of Mathematics books, and study on the history of Mathematics is not significant in increasing the students' interest to learn Mathematics. Others than the three factors, it was calculated that $p < 0.01$. That means that the others factors were significant to increase the students interest in Mathematics.

Table 5: The estimated mean $(\bar{x})$, the standard deviation (s), the hypothesis mean (μ_0), the t-value (t), degree of freedom (df), and the significance (p)

Question	$\bar{x}$	s	μ_0	t	df	p
1a	3.9523	1.0623	3	3.608272	20	0.000318
1b	3.5714	0.7464	3	3.423605	20	0.001345
1c	3.0952	0.7684	3	0.55407	20	0.29286
2a	4.0476	0.74	3	6.331094	20	0.00001
2b	3.7619	0.7003	3	4.865515	20	0.000047
3	4.1429	0.4781	3	10.69066	20	0.00001
4a	4	0.8367	3	5.344969	20	0.000016
4b	4.3333	0.5773	3	10.3286	20	0.00001
4c	4.4762	0.5118	3	12.89912	20	0.00001
5	3.0476	0.9207	3	0.231209	20	0.409754
6	4.1905	0.6016	3	8.849863	20	0.00001
7	4.3333	0.6583	3	9.057723	20	0.00001
8	4.0952	0.6249	3	7.837867	20	0.00001
9	3.381	0.8047	3	2.117415	20	0.023476
10	4.0476	0.74	3	6.331094	20	0.00001
11	4.619	0.4976	3	14.55062	20	0.00001

Conclusions and Recommendations

As conclusion, the Mathematics lecturers at UiTM Sarawak strongly agree that the students' interest in Mathematics will be influenced the students' performance in Mathematics. In the opinion of the respondents, there are many factors that are significant to increase students' interest to learn Mathematics. Therefore, all the significant factors should be taken into consideration in order to increase the students' interest to learn Mathematics where the students' interest will affect the students' performance. The factors such as the parents' educational background, having one of the family members to have a degree in one of the sub-branches of Mathematics, previous school teachers behaviour, were found to be significant to influence the students' interest to Mathematics. However, some of these factors these factors cannot be changed or controlled, such as their parents or their families' previous educational background. There are few other significant factors such as educational climate, carrying out activities outside the classroom, peer influence, and giving workshop/talk regarding Mathematics. These factors can still be controlled by the teachers or lecturers of Mathematics subject. For educational climate, the institutions or schools should provide a conducive learning environment, and comfortable classroom to increase the students' interest. Carrying outside activities that are related to Mathematics should be done since this factor is significant in increasing students' interest to learn Mathematics. Peers have a big impact to students' learning interest, attitude and habits. Even though this factor is beyond the lecturers' control, a teacher or a lecturer can try to give advice to that particular student regarding how should the Mathematics learners tolerate with their peers' influence when they are studying in Mathematics classroom. The last significant factor in this study is giving workshop/talk regarding Mathematics. It can be suggested to hold workshop/talk periodically depend on the suitability of the institutions or schools.

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Appendix: Sample questionnaire

Dear colleague; with regards to the high importance of Mathematics, the following questionnaire is designed to make use of your valuable experience in a form of a thesis entitled "**How to Increase the Amount of Students' Interests in Mathematics**".

PART A (LECTURER'S INFORMATION)
Please Ticks (√) your information in the suitable box.

Please state your highest qualification:

	PhD
	Master
	Bachelor

Please state your current level of teaching:

	Pre-Diploma
	Diploma
	Bachelor Degree
	Master Degree
	PhD Degree

Please state your working experience in UiTM:

	1-3 years
	4-6 years
	7-9 years
	10-12 years
	13-15 years

PART B (LECTURER'S OPINIONS)
Please Ticks (√) your opinions.
Please give your idea by specifying an option. The answer will be from Very Low (for much unrelated answer) to Very High (for much related answer).

1. Evaluation on the impact of family in increasing students' interests in Math.
   a. How do you evaluate the impact of parents' education level in increasing students' interests in Mathematics?

Strongly agree		Agree		Neutral		Disagree		Strongly disagree	

   b. If one of the family members has had a degree in one of the sub-branches of Mathematics, how do you evaluate the impact of this factor in increasing students' interests in Mathematics?

Strongly agree		Agree		Neutral		Disagree		Strongly disagree	

   c. How do you evaluate the impact of direct contact between students' family and Mathematics lecturers and asking for their children's educational status in increasing students' interests in Mathematics?

Strongly agree		Agree		Neutral		Disagree		Strongly disagree	

2. Evaluation on the impact of school environment in increasing students' interests in Mathematics.
   a. How do you evaluate the impact of educational climate of Mathematics classroom in increasing students' interests in Mathematics?

Strongly agree		Agree		Neutral		Disagree		Strongly disagree	

   b. How do you evaluate the impact of carrying out activities outside the classroom, such as going to the yard and teaching Mathematical materials there in increasing students' interests in Mathematics?

Strongly agree		Agree		Neutral		Disagree		Strongly disagree	

3. How do you evaluate the impact of peers in increasing students' interests in Mathematics?

Strongly agree		Agree		Neutral		Disagree		Strongly disagree	

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4. Evaluation on the impact of school Mathematics teacher in increasing students' interests in Mathematics.
   a. How do you evaluate the impact of pre-school/kindergarten teacher in increasing students' interests in Mathematics?

Strongly agree		Agree		Neutral		Disagree		Strongly disagree	

   b. How do you evaluate the impact of Primary school teacher in increasing students' interests in Mathematics?

Strongly agree		Agree		Neutral		Disagree		Strongly disagree	

   c. How do you evaluate the impact of Secondary school teacher in increasing students' interests in Mathematics?

Strongly agree		Agree		Neutral		Disagree		Strongly disagree	

5. How do you evaluate the impact of size and appearance of Mathematics book in increasing students' interests in Mathematics?

Strongly agree		Agree		Neutral		Disagree		Strongly disagree	

6. How do you evaluate the impact of previous Mathematics teachers' behaviors in increasing students' interests in Mathematics?

Strongly agree		Agree		Neutral		Disagree		Strongly disagree	

7. How do you evaluate the impact of doing activity in the Mathematics class in increasing students' interests in Mathematics?

Strongly agree		Agree		Neutral		Disagree		Strongly disagree	

8. How do you evaluate the impact of conducting research related to Mathematics, its application in daily life and other courses in increasing students' interests in Mathematics?

Strongly agree		Agree		Neutral		Disagree		Strongly disagree	

9. How do you evaluate the impact of studying the history of Mathematics in increasing students' interests in Mathematics?

Strongly agree		Agree		Neutral		Disagree		Strongly disagree	

10. How do you evaluate the impact of giving workshop/talk regarding Mathematics in increasing students' interests in Mathematics?

Strongly agree		Agree		Neutral		Disagree		Strongly disagree	

11. How do you evaluate the impact of increasing students' interests in Mathematics will influence their Mathematics examination result?

Strongly agree		Agree		Neutral		Disagree		Strongly disagree	

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EMPLOYEE EMPOWERMENT AND TURNOVER INTENTION: A REVIEW PAPER

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Abstract: *Turnover has been a critical issue in the field of human resource management. Although thousands of researches have been conducted in previous decades, the issue of turnover has not been solved by the researchers. Turnover intention is crucial to be studied because it is known as the most predictable variable in predicting the actual turnover among employees. Many antecedents have been introduced to improve turnover intention in organizations. Employees' empowerment is known as one of the antecedents. According to Social Exchange Theory (SET), it explains that empowerment could help to reduce turnover intention because positive behaviour of organizations could reinforce the positive behaviour of employees. The employees could reduce the intention to leave in order to reciprocate to their organizations. However, it was claimed that the effect of employees' empowerment on turnover intention is little known. Hence, there is a need to explore the relationship between employees' empowerment and employees' turnover intention. The past studies that investigated the relationship between employees' empowerment and employees' turnover intention are important for this review paper. This review writing involved the articles that are ranged from 2008 to 2018, which is a decade. From the past studies, it was found that the relationship between employees' empowerment and employees' turnover intention among employees is inconsistent. Some studies revealed significant relationship, while other studies claimed that there is non-significant relationship between the variables. The inconsistency of findings has caused ambiguity to the linkage between the variables. It is recommended that future studies should conduct their studies in longitudinal form in order to capture the trend of changes throughout their research.*

Keywords: *Empowerment, Turnover Intention, Review Paper*

Introduction

Since the past decade, turnover has been known as one of the major issues in the field of human resource management (Abbasi & Hollman, 2000). Turnover could put organizations in danger if it happens continuously, such as delaying the planning of human capital, as well as the decreasing of productivity (Condrey, 2005; Bertelli, 2007). Hence, it was claimed that turnover intention should be focused because behavioural intention is recognized as the greatest forecaster of actual behaviour (Egan, Yang, & Bartlett, 2004). Many efforts had been done in the past studies in order to reduce turnover intention among employees. One of the contributors is known as employee empowerment. Employee empowerment is known as one of the elements that could improve behaviour of employees because empowered workers tend to behave positively in organizations (Ali et al., 2017). It is believed that, empowering

employees could help in managing human resource effectively, which in turn increasing the competitiveness of organizations (De Klerk & Stander, 2014). Hence, the leaders in organizations should be thoughtful in empowering their subordinates (Bakker & Schaufeli, 2008). Due to the importance of employee empowerment, recent scholars have been including the variable of employee empowerment as one of the elements that could improve the positive psychology at workplace (Mills, Fleck, & Kozikowski, 2013). Because of that, the variable of employee empowerment has been gaining attention in the past decade, hence increasing the evidence of the importance of employee empowerment in organizations (Albrecht & Andreetta, 2011).

However, Kim and Fernandez (2017) claimed that, although many studies have been conducted to examine the relationship between employee empowerment and turnover intention, most of the past studies did not capture the full content of empowerment because the scholars studied empowerment in unidimensional. Hence, there is a lack of empirical proofs on the relationship between the constructs of engagement and turnover intention (Ali et al., 2017). In addition to that, the effects of empowerment are yet to be confirmed because it was claimed that different societies could differ the perspective of empowerment, for example Western view and Eastern view (Yip, 2004). Humborstad and Perry (2011) has cautioned that scholars should not overlook the perspective of empowerment in different cultures. Besides, it was argued that previous empowerment researches did not successfully indicate consistent and conclusive findings on the linkage between empowerment and behaviour of employees (Humborstad & Perry, 2011). Based on the issues above, it was highlighted that the linkage between empowerment and turnover intention has been questioned due to the lacking of empirical work on the linkage between the variables (Ali et al., 2017). The inconsistence of findings could bring negative consequences to organizations, for example, it was claimed that the adoption of empowerment programs at workplace is not widespread (Kim & Fernandez, 2017). Hence, due to the problem statement, the authors intended to review the relationship between employee empowerment and turnover intention in the past decade (2008-2018).

Literature Review

Definition and concepts of employee empowerment

Several definitions of empowerment were introduced by the past researchers. According to Conger and Kanungo (1988), employee empowerment is defined as the extent to which the employee believes that his or her ability in performing a task in organization. Besides, Thomas and Velthouse (1990) claimed that employee empowerment is one of the types of motivation which could intrinsically motivates an individual. From a perspective of managerial, employee empowerment is described as the extent to which the managers or superiors share the information to subordinates, providing rewards, sharing resources, as well as sharing the authority to subordinates (Kanter, 1979). On the other hand, Spreitzer (1995) believed that employee empowerment could be operationalized into four dimensions, namely impact, meaning, self-determination, and competence, where employees should be actively participating in works. In order to empower employees, it is important to share information such as the performance of the particular organization (Bowen & Lawler, 1995).

Definition and concepts of turnover intention

Turnover intention exists when an employee has determination to quit his or her job (Ali, 2008). When the employee has turnover intention within himself, the employee tends to have firm decision and full deliberation as well as readiness to stop providing efforts to the

organizations (Tett and Meyer, 1993). The concept of reasoned behaviour has been arisen in the initial evolution of the writing of behavioural intent, where the assessment of intention of behaviour is the greatest predictor to the particular actual behaviour (Fishbein & Ajzen, 1975). Past researchers had acknowledged that behavioural intentions could significantly predict turnover, hence it is believed that turnover intention could be the most vital element in order to reduce actual turnover (Abrams, Ando, & Hinkle, 1998). Generally, turnover intention has been recognised as the utmost forecaster to actual turnover (Egan, Yang, & Bartlett, 2004).

Methodology

In this review paper, the methodology that adopted was named literature searching and reviewing. The debates about empowerment and turnover intention were reviewed during the process of writing. The objective of this review paper was to determine the differences of linkage between empowerment and turnover intention among different backgrounds of respondents. In order to accomplish the objective of this paper, the authors reviewed the empirical research papers which are ranged between the years of 2008 to 2018. The articles were comprehensively searched through several databases, such as Scopus, Elsevier, and Google Scholar. In order to collect the papers that are suitable for this review paper, five inclusions were determined by the authors. Firstly, the authors included empirical papers which provided findings, such as case studies, field studies, and surveys. The authors did not include non-empirical papers, such as theoretical papers. Secondly, we included those studies that provided the values of reliability and validity of instruments. Without valid information of instruments, it can affect the validity of findings. Thirdly, we included those studies that examined the variables among corporate personnel samples. It was claimed that student samples and personnel samples are significantly different in research. Next, we included only those relevant variables. The authors focused on the selected variables in this review paper only, which are empowerment and turnover intention. Lastly, the authors included only turnover intention which was rated by employees themselves, instead of the actual rate of turnover in selected studies.

Results

After reviewing the past studies ranged from 2008 to 2018, it was found that there are few past studies that examined the relationship between empowerment and turnover intention. Empowerment to employees is able to influence the intention of turnover among employees, where it was revealed that empowerment has significant linkage with turnover intention (Oh & Chung, 2011). The scholars measured empowerment as self-determination, meaning, and competence, where these dimensions of empowerment could help to reduce turnover intention. Similarly, Fook et al. (2011) and Kebriaei et al. (2016) measured empowerment under the same dimensions as well. The scholars revealed the consistent finding, where there is a significant relationship between empowerment and turnover intention. The finding is consistent with another study that was conducted by Albrecht and Andreetta (2011). The scholars measured empowerment in terms of self-determination, meaning, and competence as well. With similar dimensions of empowerment, Albrecht and Andreetta (2011) revealed the similar findings, where there is significant linkage between the variables among the respondents. This suggests that, similar dimensions of variables could contributes to the similarities of findings.

Another study that was conducted by Park and Park (2008) revealed that, empowerment had significant relationship with turnover intention. The scholars measured

empowerment in forms of opportunity, information, support, and resources. Similarly, another study showed that there is significant linkage between empowerment and turnover intention (Harris, Wheeler, & Kacmar, 2009). In addition, Song (2013) revealed similar finding, where there is significant relationship between empowerment and turnover intention. In their study, the scholars measured empowerment as opportunity, information, support, and resources as well. Hence, it can be claimed that empowerment to employees could help to decrease the turnover intention. Similarly, Van Schalkwyk et al. (2010) revealed that there is significant relationship between empowerment and turnover intention.

Other than that, it was also found that there is significant relationship between the variables (Rajkumar & Bhuvaneswari, 2015). Similar with previous studies, Kumar and Singh (2012) measured empowerment as unidimensional, and the scholars revealed that there is a significant relationship between empowerment and turnover intention. Followed by next study, Jeon and Yom (2014) measured empowerment in unidimensional as well. The scholar revealed that, empowerment had significant influence on reducing turnover intention among the respondents. This result consistent with another study which was conducted by Ali et al. (2017) as well as Kim and Fernandez (2017). Although most of the studies agreed on significant linkage between empowerment and turnover intention, another study which was conducted by Oyeleye et al. (2013) revealed that there is no significant relationship between the variables. The scholars mentioned that empowerment has no significant influence in reducing turnover intention among the employees. Contradictorily, De Klerk and Stander (2014), who measured empowerment in terms of emotional, cognitive, and physical, reported that empowerment to employees could significantly affect turnover intention. The finding was similar with another study which was conducted by Khalid et al. (2018) as well as Thurston and Glenton (2018), where the scholars mentioned that there is a significant relationship between the variables. To conclude, it can be clearly seen that the relationship between empowerment and turnover intention is remained uncertain due to the findings of relationships are inconsistent.

Conclusion

As a conclusion, this review paper summarized the linkage between empowerment and turnover intention by revealing the trend of linkage from 2008 to 2018. It is clear that the linkage between empowerment and turnover intention is remained ambiguous and inconsistent. Although there are scholars mentioned that there is significant relationship between the variables, there are scholars disagreed and found insignificant relationship between empowerment and turnover intention. The results differs from one context to another. In order to improve the inconsistency of findings, future studies are recommended to examine empowerment dimensions specifically. It is crucial to examine the differences among the dimensions of empowerment in organizations. Besides, it is recommended to conduct future studies in different industries in order to confirm the linkage between the variables. From the findings, it can be seen that most of the studies were conducted in cross-sectional design, hence calling for more future studies that can be conducted in longitudinal design to capture the trend of changes. It is suggested that the leaders in organizations should encourage the culture of empowerment, which in turn reducing employees' turnover intention. It should be cautioned that, continuous turnover could put organizations in danger due to the loss of potential employees.

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VALUE-AT-RISK MODELS FOR COMMERCIAL BANKS IN MALAYSIA

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Abstract: *Malaysia has been growing rapidly during the last decade in a competitive regional market and commercial banks have progressively increased their activities in taking higher risk investments. In such an intense competitive market, financial institutions are required to manage their trading activities and ensuring accurate prediction of risks. VaR models are used to assess risk behaviours in financial institutions and one of the most popular measuring tool. The beneficial part of using this model is that commercial banks will be prepared in case of any predicted losses based on the market movements on their stock prices. Our study is to apply the most appropriate risk measurement tool to quantify market risk of commercial banks in Malaysia using Value-at-Risk (VaR) models.The stock prices of each Malaysia commercial bank are taken based on secondary data for the year 2017. The secondary data is extracted from Bloomberg Terminal which provides daily real time series data. We have chosen the VaR models that are commonly used to measure the market risk, which are Parametric VaR, Historical Simulation VaR and Monte Carlo Simulation VaR. For the year 2017, all commercial banks have higher VaR value compared to the benchmark and only Public Bank Berhad has a VaR value of 1.38% which is lower than the benchmark at a value of 1.53%. The results shown that one out of eight commercial banks that have been tested have the lowest VaR in all models. Thus, this could provide investors and risk managers a better way to make decision on their investments and portfolios of the commercial banks in Malaysia. The VaR results simulated give an insight on how commercial banks in Malaysia can manage their risks and assist investors and risk managers to understand how market risk is being measured.*

Keywords: *VaR, Model, Commercial Banks*

Introduction

In Basel Accord 1998, they encourage the safety and soundness of the global financial system and to create a level-playing field for internationally-active bank as their primary objective, but the original goal was to provide a set of minimum capital requirements for commercial banks (Jorion, 2003). Initially, the Basel Accord only covered credit risk, but it was amended in 1996 to incorporate market risks as stated in Basel II. Value at Risk (VaR) models has been sanctioned for determining market risk capital requirements for large banks by U.S. and international banking authorities through the Market Risk Amendment to the Basel Accord in 1996. Ever since then, VaR has surprisingly increase in popularity and became the standard measure for financial and non-financial institutions to measure their financial market risk (Berkowitz & O'Brien, 2001). For most part, VaR analyses in the public domain have been limited to comparing modelling approaches and implementation procedures using illustrative portfolios (Hendricks, 1996; Marshall & Siegel, 1997; Pritsker, 1997).

Over the past few decades, Malaysia have grown to be a competitive market and commercial banks have progressively increased in performance and it is their obligations to provide the needs of people towards a better country. In such a competitive market, banks are required to have reliable statistical data on daily trading activities for an accurate forecast. In Europe, researchers study the risk behaviour in financial institutions and one of the most popular measuring tool is VaR model. The significance of using this model is that financial institutions will be prepared in case of any predicted losses on the volatilities of the market in their countries.

Literature Review

The primary issue that every financial institution encounter is risk. First and foremost, there are two classification of risks which are financial risk and business risk. The principal cause of financial risk is due to the high variation in the financial variable that leads to potential losses in the financial market (Jorion & Khoury, 1996). As for business risk, it focuses on the elements that affect the product or the market that is directly related to the company's activities. The occurrence of financial risk is associated to the leverage leading to the risk that the debts and obligations are not consistent with the elements of the assets (Gleason, 2000).

The concept of risk management is believed to come into being after World War II. Snider (1956) observed that the existence of risk management book references could not be found, not even universities that were offering courses regarding this subject at the time. Several sources date the origin of modern risk management to 1955 to 1964 (Crockford, 1982; Harrington and Neihaus, 2003; Williams and Heins, 1995). Mehr and Hedges (1963) and Williams and Heins (1964) was the first two publishers that covers pure risk management in their academic books that exclude corporate financial risk. The focus of risk management whereby the use of derivatives as instruments to manage systematic and unsystematic risk began in 1970s, developed very quickly during the 1980s. During the 1980s, companies began to consider financial management or risk portfolios and; financial institutions, including banks and insurance companies, intensified their market and credit risk management activities (Dionne, 2013). Then, operational risk and liquidity risk management started to appear in the 1990s. Now, modern derivative instruments are introduced such as forwards, futures, swaps, and options are used to facilitate the market volatility. Derivatives are used to offset the risks in the underlying assets and portfolios because their cash flows and values change with the involuntary changes of the interest rates, exchange rates and commodity prices.

The conceptualization of Value at Risk (VaR) can be traced back a few decades ago whereby it became vastly popular specially to quantify their risk. A number of major financial institutions started working on the internal risk management to measure and aggregate risks across the institutions as a whole back in the late 1970s and 1980s. The RiskMetrics system was first established in 1989 and originated by the chairman JP Morgan, Dennis Weatherstone and was well known for determining risk and potential losses across the bank's entire trading portfolio over the next 24 hours (Dowd, 2005).

VaR is defined as the maximum loss over a target horizon such that there is a low, pre-specified probability that the actual loss will be larger (Jorion, 2003). This definition involves two quantitative factors which are the horizon and the confidence level. VaR uses estimates such as standard deviations and correlations between the returns to different traded instruments are used based on the standard portfolio theory. Besides that, not all VaR systems were based on portfolio theory but were built based on historical simulations approaches that estimate VaR from histograms of past profit and loss data. Other systems were also

developed using Monte Carlo simulation techniques. Initially, Basel Committee specified a basic model to calculate VaR, yet the model had some inadequacies and critics (Taleb & Jorion, 1997). Therefore, Basel Committee allowed institutions to implement internal models to access their VaRs by using backtesting in order to evaluate the accuracy of their models.

According to the Star Online, Malaysian banks are among the first in the world to obtain Basel II compliance when the Basel Committee on Banking Supervision issued the new accord that came into force in 2006. The managing director (Global Capital Markets) of business software house EDS, Gabriel S. David stated that "Basel II really is an attempt to define best practice in managing a bank – operation risks, credit risks, market risks – best practice even in audit." Therefore, banks in Malaysia acknowledged their importance as the simulators of the economy which by the Basel Accord has been implemented in a developing country to increase their banking supervisions thus to promote the banking system to function more effective and efficiently. However, revisions in Basel III was then introduced by the Basel Committee on Banking Supervision to ensure banks were ready to handle any crisis that could affect their capital position by increasing bank liquidity and decreasing bank leverage. Malaysian banks started embracing the Basel III accord in January 2013 and they may choose between 2 methodologies in determining market risk for regulatory capital requirements which are (1) the standardized approach and (2) internal models approach for market risk.

Before learning about the origin of VaR models, we must appreciate the conventional risk measurement tools which are gap analysis, duration analysis, scenario analysis, portfolio theory and derivatives risk measures (Dowd, 2005). These were the fundamentals that helped the financial institutions to build a better risk management after receiving several feedbacks from those who have used it. As time goes by, the present financial institutions have a more accessible capital market with the help of good risk management. Market risk is the foundation in this study as VaR models have been sanctioned under 1996 Market Risk Amendment to the Basel Accord for determining market risk capital requirements for financial and non-financial institutions. Regulators have built great interest for Value at Risk due to the benefit of acting as a financial tool to measure market risk. The banking and financial sector must ensure financials stability; and it is imperative to measure financial risks accurately and implement a strong risk management system (Khalafalla, 2014).

Research Design

The scope of this study is evaluating the most appropriate risk measurement tool to quantify the market risk of commercial banks in Malaysia using Value-at-Risk (VaR) model developed in October 1994.

The eight commercial banks chosen for this research are listed in Bursa Malaysia that consists of Affin Bank Berhad, Alliance Bank Malaysia Berhad, AmBank Berhad, CIMB Bank Berhad, Hong Leong Bank Berhad, Malayan Banking Berhad, Public Bank Berhad and RHB Bank Berhad. The Bursa Malaysia Finance Index is used as the benchmark for the Value at Risk analysis.

According to this study, the evaluation will be done on the chosen simulated VaR models based on the performance of the commercial banks in Malaysia as well as the overall finance index of the finance and banking sector that acts as the benchmark. The performance will be based on daily closing price for the year 2017. Each bank will be using the same methodology and the risks are compared using the standard value of measures. The VaR model describes the potential losses that a financial institution face for the given year and in order to value the Malaysia financial sectors in depth seems astonishing whereby a statistical measure can mean a lot to financial institutions for a better decision making in the future.

This research uses Value-at-Risk models which is greatly used worldwide due to its simplicity and intuitive appeal in measuring market risk in the financial sector. Every approach has its own advantages and disadvantages that will be further explored. This study aims to analyse and differentiate the three approaches which is the best to be utilized to measure market risk of commercial banks in Malaysia as listed in the Bursa Malaysia. After running these models, we should be able to clarify the appropriateness and usefulness of these techniques.

The VaR results simulated gives an insight on how commercial banks in Malaysia manage their risks that is part of the findings for this study. The findings of this study also can acquire the analysis of each commercial bank that are compared with the benchmark which is the Bursa Malaysia Finance Index that will tell us an overview how the banks are doing for 2017.

There are a variety of approaches of computing Value at Risk but in this study will be focusing on three primary techniques which are the Parametric VaR approach, the Historical Simulation VaR approach and the Monte Carlo Simulation VaR approach. The analysis is computed based on assumptions on the return distributions for market risks and by using parameters such as variances and covariances across the risk. Hypotheses testing will also be carried out in this study to compare between the approaches for the best model.

Findings

For year 2017, CIMB Bank Berhad has the highest daily mean returns among all the commercial banks with a mean value of 0.1580% as highlighted in Table 1. As for the level of volatility, Alliance Bank Malaysia Berhad has the highest standard deviation with the value of 1.3532% which indicates that the price movement of the companies in Alliance Bank Malaysia Berhad are highly eruptive. For the degree of variation, AmBank Berhad has the highest price movement per unit measured in RM which is 9647.8571. This shows that the movement of each unit in the share prices in AmBank Berhad is 9647.8571 which is massive compared to other commercial banks.

Table 1: The mean and standard deviation of commercial banks for year 2017

List of commercial banks	Mean	Standard deviation	Coefficient of Variation
Affin Bank Berhad	-0.0111%	1.1388%	-10259.4595
Alliance Bank Malaysia Berhad	0.0400%	1.3532%	3383.0000
AmBank Berhad	0.0140%	1.3507%	9647.8571
CIMB Bank Berhad	0.1580%	1.2691%	803.2278
Hong Leong Bank Berhad	0.1063%	1.1514%	1083.1609
Malayan Banking Berhad	0.0873%	0.7485%	857.3883
Public Bank Berhad	0.0218%	0.3905%	1791.2844
RHB Bank Berhad	0.0277%	1.1508%	4154.5126
KLFIN (Benchmark)	0.0711%	0.4974%	699.5781

The results depicted in the following table shows the 1% VaR returns and VaR values of the Bursa Malaysia finance index and the Malaysia commercial banks stock for only 1 year. Each individual asset was computed using parametric VaR method, historical simulation VaR method and Monte Carlo Simulation VaR method as stated above.

Table 2: The VaRs of Malaysian Commercial Banks for 2017

	Parametric (99%)		Historical (99%)		Monte Carlo (99%)	
Individual asset	Return	Value	Return	Value	Return	Value
ABANK	-2.66%	RM26,602.79	-3.56%	-RM35,590.95	-2.87%	RM28,669.42
ABMB	-3.11%	RM31,079.86	-3.55%	-RM35,506.69	-3.36%	RM33,550.11
AMMB	-3.13%	RM31,282.89	-3.12%	-RM31,220.02	-3.37%	RM33,748.48
CIMB	-2.79%	RM27,943.71	-4.63%	-RM46,251.02	-3.03%	RM30,255.14
HLBK	-2.57%	RM25,722.79	-2.49%	-RM24,897.55	-1.92%	RM19,183.65
MAY	-1.65%	RM16,540.32	-3.30%	-RM32,990.16	-1.79%	RM17,884.15
PBK	-0.89%	RM8,866.35	-1.27%	-RM12,739.03	-0.96%	RM9,560.40
RHBBANK	-2.65%	RM26,494.53	-3.77%	-RM37,665.50	-2.86%	RM28,583.68
KLFIN	-1.09%	RM10,860.14	-1.33%	-RM13,301.15	-1.17%	RM11,746.89

The data sets utilized are the daily stock returns for the year 2017 for each commercial bank and the finance index. The computation of VaR are calculated using the three approaches as mentioned above with a confidence level of 99%. The three approaches calculated has a range that are merely close to each other.

Table 3: Ranking of VaR for 2017

	Parametric VaR	Historical Simulation VaR	Monte Carlo Simulation VaR
ABANK	6	7	6
ABMB	8	6	8
AMBANK	9	4	9
CIMB	7	9	7
HLBANK	4	3	4
MAY	3	5	3
PBK	1	1	1
RHB	5	8	5
KLFIN	2	2	2

Based on the results, we concluded that all the three approaches are not the most accurate method for measuring Value at Risk for Malaysia commercial banks based on decision rule. The results shown that one out of eight commercial banks that have been tested have the lowest VaR in all models. Ever since 2013, the results have proven that Public Bank Berhad has been maintaining their market risk at a conservative level and have been analysing their risk properly (Lee and Chan, 2014). Other than that, Public Bank Berhad also has a low standard deviation and lowest VaR value than the benchmark (KLFIN), which may be considered a good and value investment.

Lastly, the VaR results for CIMB Bank Berhad in Table 2 and AmBank Berhad has proven the disadvantages of using historical simulation VaR. CIMB Bank Berhad has the highest level of volatility thus the market fluctuations does not reflect on the VaR values and resulted in an inaccurate VaR value. AmBank Berhad may not have the highest volatility, but it is proven to be inaccurate because the difference in the other VaR values are to be respectively high. Hence, a shorter time period in terms of days or weeks may create a better estimation error (Jorion, 1997).

Conclusion

As stated by Jorion (2007), VaR models are only as useful in so far as they predict risk accurately. VaR model indeed provides a framework to measure risk but does not confirm the accuracy of the risk measurement. According to Blanco & Oks (2004), it is a necessity of evaluating the accuracy of VaR not only for the importance of VaR techniques for risk measurement purpose but also act as an effective risk management tool.

Jorion (2007) stated that appropriate backtesting techniques should therefore be used in order to verify the accuracy of VaR models. Backtesting is a statistical framework that comprises of verifying the realized losses with the predicted VaR estimates. We will like to recommend backtesting to strengthen the accuracy of these models.

The VaR results simulated will provide a good yardstick on how commercial banks in Malaysia can mitigate their risks and better understand how to use their strategic options to deal with market risks.

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IS SUSTAINABILITY AWARENESS HIGH AMONG STUDENTS OF A GREEN UNIVERSITY? SOME EVIDENCE FROM UNIVERSITY COLLEGE SABAH FOUNDATION, SABAH, MALAYSIA

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Abstract: *Green campus has become a trend and it has also become an important factor for higher education providers in their bid to create a conducive learning experience for college students. The Green Campus endeavours to extend learning beyond the lecture theatre to develop responsible attitudes and commitment to the environment, both at home and in the wider community. Labelled as a boutique green university, it is timely to examine University College Sabah Foundation (UCSF) students' sustainability awareness to find out if the green campus concept has made them more aware of their surroundings. The sample is drawn from the current UCSF students from six programmes. Quantitative research using questionnaire survey was used to measure the level of sustainability awareness of the students and to examine the relationship of the dependent variable (sustainability awareness index) with three independent variables - sustainability knowledge, behavioural attitude and sustainability information. Data collected were analysed using SPSS. Results from the study showed that sustainability knowledge and sustainability information have a significant influence in determining the level of sustainability awareness. Based on the results obtained in this study, it can be deduced that efforts to increase the awareness of the students can come from formal education and through the dissemination of sustainability information.*

Keywords: *Sustainability awareness; sustainability knowledge; sustainability information; behavioural attitude; green campus.*

Introduction

According to the United Nations (UN), climate change has become a defining issue because its impacts are global in scope and unprecedented in scale (UN, n.d.). As a result of the issue of climate change, sustainable development has become synonymous with every facet of developed as well as developing societies. The latest trend is for universities and colleges to adopt the sustainability concept in what is popularly known as the green campus concept. In Malaysia, the government is committed to promote sustainable development on the young generation. This is evident in the inclusion of the concept in the country's education system at all education levels (Foo, 2013). The goal is to educate and to bring about awareness to the young generation on the importance of sustaining human needs and preserving the environment for the future.

According to Foo (2013) and Ahmad, Noor & Ismail (2015), educational institutions in the country including Universiti Sains Malaysia (USM), Universiti Kebangsaan Malaysia (UKM) and Universiti Teknologi Mara (UiTM) have played active roles in sustainable development through various programmes.

At Sabah, Malaysia, University College Sabah Foundation (UCSF) has taken a lead role in cultivating the culture and practice of sustainability development through its green university concept. A study to examine sustainability awareness of its students is therefore timely and will contribute to new knowledge. This study therefore aims to examine UCSF's greening efforts by measuring the sustainability awareness of its students to ensure it lives up to its brand of a green university.

Literature review

Definition and concepts of sustainable development

According to the definition by the World Commission on Environment and Development (WCED), 1987, sustainable development is development that meet the needs of the current world's population without compromising the needs of the world's population in the future.

In 1992, the United Nations released a ground-breaking action plan for sustainable development called Agenda 21. Agenda 21 is a blueprint that sets out actions that can be taken to contribute to global sustainability in the 21st century. It recognises that most environmental challenges have their roots in local activities and therefore encourages Local Governments to promote local environmental, economic and social sustainability by translating the principles of sustainable development into strategies that are meaningful to local communities (UN, 2002).

The Sustainable Development Goals (SDGs) is the successor to the Millennium Development Goals (MDGs) and is widely known as Agenda 2030, with reference to the end year by which the SDGs should have been attained globally. The issues on sustainable development will thus continue (UN, 2018).

Sustainable Development and education

The United Nations (UN) through its declaration of 2005-2014 as the Decade of Education for Sustainable Development (DESD) aims to integrate the principles, values and practices of sustainable development into all aspects of education and learning. The UN believe that education will encourage changes in behaviour to shape a more sustainable future in terms of environmental integrity, economic and fair society for present and future generations (UNESCO, 2007).

According to Scott (2013), it is through education that changes in values, attitudes, skills and behaviour can be achieved.

Tilbury, Stevenson, *Fien, & Schreuder* (2013) further added that the steps taken by most countries to promote the theory and practice of education on sustainable development is through active participation of the academic community.

Sustainability awareness

Many studies have been conducted to measure the sustainability awareness of university students across the globe. Among these studies are: Tikka, Kuitunen & Tynys (2000) – Finland, Sivamoorthy, Nalini, & Kumar (2013)_ - India, Heyl, Moyano Diaz, & Cifuentes (2013) – Chile, Chaplin and Wyton (2014) – UK, Zwickle, Koontz, Slagle, & Bruskotter (2014) – USA, Ahmad, Noor, & Ismail (2015) – Malaysia, Jeong, Jung, & Koo (2015) – USA, Mahat and Idrus (2016) - Malaysia, Garcia and Luansing (2016) - Philippines, and Fu, Zhang, Xiong, & Bai (2018) – China. The literature on sustainability is vast but there is still plenty of room for new knowledge in view of the pervasiveness of the topic.

Methodology

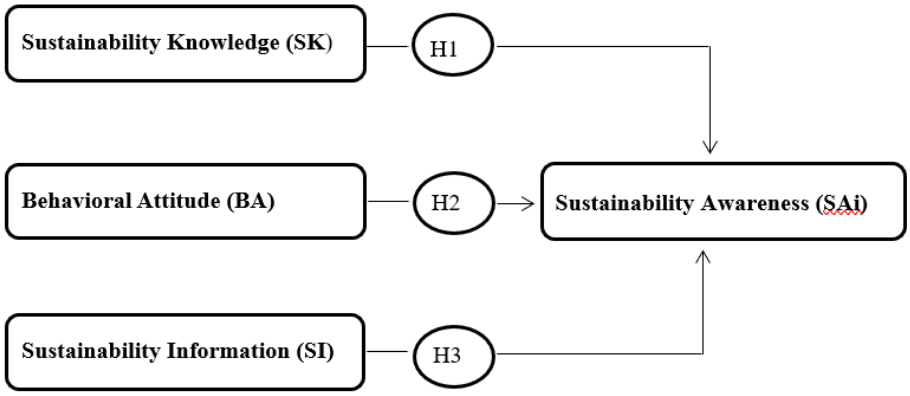
A very simple quantitative approach was adopted for this research study. Questionnaires provide a relatively cheap, quick and efficient way of obtaining large amount of information

from a large sample of people. This is useful for large populations when interviews would be impractical (McLeod, 2018).

Initially, the survey forms were distributed to UCSF students using Google Docs but the response was very slow even though a link was given to them. A contingency plan was devised which required the use of printed forms to obtain better response and feedback.

The data were analyzed descriptively in terms of measures of central tendency and measures of variability using SPSS. Correlations and regression analysis were conducted to measure the relationships between the dependent and independent variables.

Research framework and model



Below are the hypotheses that support the theoretical framework of the study:

H1: There is a positive relationship between sustainability awareness and sustainability knowledge.

H2: There is a positive relationship between sustainability awareness and behavioural attitude

H3: There is a positive relationship between sustainability awareness and sustainability information

Sustainability awareness index is the dependent variable, while sustainability knowledge, behavioural attitudes and sustainability information are the independent variables.

Measurement of the variables

Sustainability awareness index is measured using twenty (20) yes-no response to general questions related to sustainability. The number of correct responses is converted to percentages to derive the sustainability awareness index.

Sustainability knowledge requires the respondents to answer twenty (20) multiple-choice questions that test the respondents' knowledge on sustainability related issues.

Behavioural attitude aims to identify the attitude of the respondents toward various aspects of the environment using ten (10) sustainability related statements.

The last independent variable, sustainability information examines the type of medium of communication that has helped the respondents to become aware of sustainability issues and initiatives.

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Findings and discussion

Descriptive statistics

The population of the study consisted of UCSF students both at the diploma and degree levels. A total of 276 students (169 diploma and 107 degree), out of about 600 students participated in the survey.

Table 1 and 2 shows the breakdown of respondents by programme and place of residence respectively.

Table 1: Breakdown of respondents by programme

Programme	Frequency	Percentage
Accounting	51	18.5
Business & Entrepreneurship	82	29.7
Tourism & Hospitality	111	40.2
Arts & Creative Media	10	3.6
Social sciences	10	3.6
Sciences	12	4.3
Total	276	100

Table 2: Breakdown of respondents by place of residence

City	143	51.8
Urban	70	25.4
Rural	63	22.8
Total	276	100

Most of the respondents are diploma students from the Tourism & Hospitality programme who are residing in the city.

Descriptive analyses

Based on Table 3 below, the sustainability awareness of the respondents are over 70% regardless of gender, age and level of study.

Table 3: Sustainability awareness by gender, age and level of study

Descriptives

Gender		Mean
Sustainability Awareness	Male	72.89
	Female	74.41

Age	Mean

Sustainability Awareness	18-20	73.25
	21-23	73.91
	24+	75.39

Level of Study		Mean
Sustainability Awareness	Diploma	72.63
	Degree	75.61

The above data is further substantiated by the programme and place of residence where the awareness is also over 70%.

Table 4: Sustainability awareness by programme and place of residence

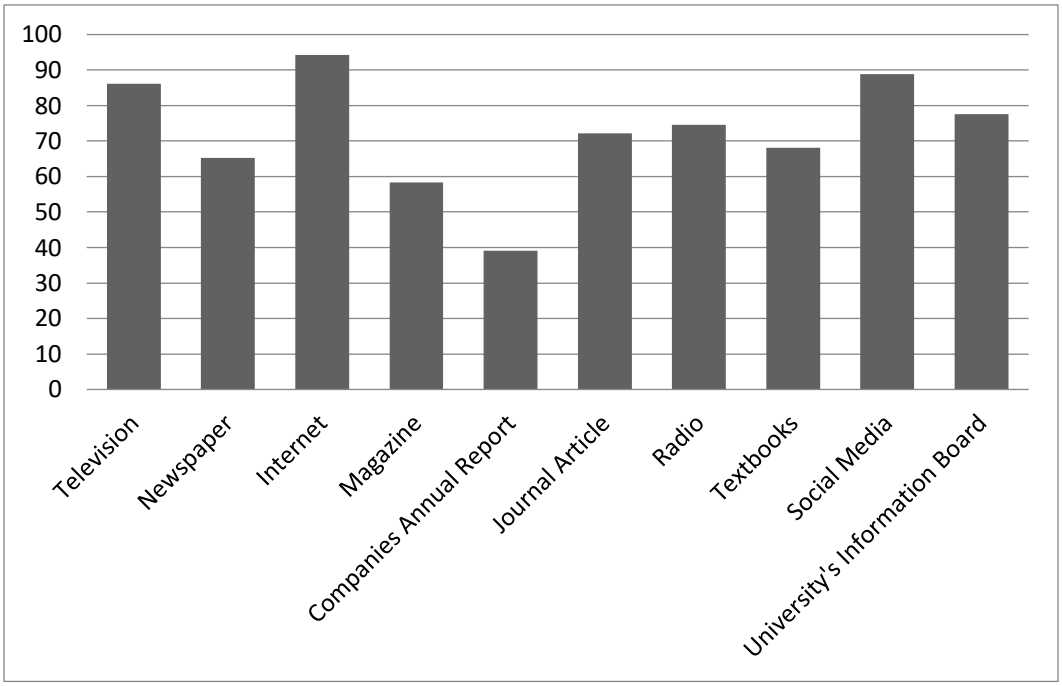
Descriptives

Programme		Mean
Sustainability Awareness	Accounting	79.90
	Business & Entrepreneurship	72.32
	Tourism & Hospitality	71.17
	Arts & Creative Media	75.50
	Social Sciences	78.00
	Sciences	77.08

Residence		Mean
Sustainability Awareness	City	72.48
	Urban	75.21
	Rural	75.16

Table 5 below shows that the most popular source of sustainability information comes from the internet, social media and television.

Table 5: Sustainability information sources



Correlations analysis

Table 6 below shows that sustainability knowledge and sustainability information are significant predictors of sustainability awareness at the P < .05 and P < .001 levels respectively.

Table 6: Pearson correlations

Correlations

		Sustainability Awareness	Sustainability Knowledge	Behavioural Attitude	Sustainability Information
Sustainability Awareness	Pearson Correlation	1	.142*	.057	.209**
	Sig. (2-tailed)		.018	.343	.000
	N	276	276	276	276

* Correlation is significant at the 0.05 level

** Correlation is significant at the 0.01 level

Regression analysis

From the table below, sustainability knowledge and sustainability information are significantly related to sustainability awareness at the P < .05 and P < .001 levels respectively.

The data also do not have any collinearity problem. Tolerance is > 0.1 and VIF < 10 for all variables.

Table 7: Regression analysis

	Standardized Coefficients	t	Sig.	Collinearity Statistics	
	Beta			Tolerance	VIF
(Constant)		15.027	.000		
Sustainability Knowledge	.121	2.044	.042	.986	1.014
Behavioural Attitude	.021	.357	.721	.977	1.024
Sustainability Information	.194	3.254	.001	.972	1.028

Adjusted $R^2 = 0.59$

$F = 5.69$

$P < 0.001$

T-test analysis

An independent sample T-test was conducted to compare the level of sustainability awareness and the sustainability awareness (S) where respondents rate themselves on their level of sustainability awareness.

There were significant differences in the scores for level of sustainability awareness (M = 73.79, SD = 14.99) and the self-ranked sustainability awareness (S) (M = 59.79, SD = 18.73), t (276) = 11.05, P = 0.000. One possible reason may be that the respondents were not aware of their sustainability level due to lack of practical applications.

Table 8: Paired samples test

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Sustainability Awareness - Sustainability Awareness (S)	13.931	20.994	1.264	11.443	16.419	11.024	275	.000

Conclusions and limitations

In conclusion, the level of sustainability awareness based on the respondents demographic data did not differ by gender, age, level of study, programme and residence. The findings from the study also showed that sustainability awareness of UCSF students is high with

sustainability knowledge and sustainability information being the most significant influencing factors.

This study, however, has a few limitations; the first limitation is the lack of generalisability due to the setting; the study is also limited by the variables being examined – other variables may produce different results; and lastly, response bias may have affected the accuracy of the data and thus, the results.

Implications and future directions

The findings from this study shows that sustainability awareness is influenced by sustainability knowledge and sustainability information. This implies that courses in sustainable development would greatly enhance the students' awareness and the use of proper media tools that are of interests to the students.

Being sustainability aware is not the end but rather the beginning of more concerted effort towards the practise of sustainability. The mindset of students must be transformed from being sustainably aware to become full fledge advocate of sustainability. The green campus concept which endeavours to extend learning beyond the lecture theatre to develop responsible attitudes and commitment to the environment is therefore an effective platform for a life-long learning experience which students can bring with them to their homes and into the wider community.

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INVESTIGATING THE EFFECTS OF PERCEIVED RISK ON INFORMATION ADOPTION PROCESS IN CONTEXT OF PROMOTING ORGAN DONATION THROUGH SOCIAL MEDIA PLATFORM

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Abstract:*Organ donation is the process of donating parts of body of individual after the individual passed away. This matter should be given appropriate attention since there is lack of individuals registering or pledging as organ donor. The low number of people register as organ donors is faced by Malaysia and many Asian countries as well as countries throughout the world. There are many factors that contribute to the lack of individuals registering as organ donors and one of them is perceived risk. Perceived risk is defined as the potential organ donor perceptions about the possible uncertain negative outcomes from register as organ donors. For this research, perceived risk is studied in the context of how the perceived risk give impact in the individual's process of receiving information and directly influence toward intention to register as organ donors. The information is disseminated through social media platform. The process of receiving information is including the attitude towards information, information usefulness, information adoption and intention to register as organ donors. In overall, perceived risk is an important component in the process for individual to adopt the information and consequently having intention register as organ donors.*

Keywords : *Social Media, Organ Donation, Perceived Risk, Information Adoption, Social Marketing.*

Introduction

In 2017, it is stated that 45% of the world population had facilities to use the internet. In terms of world distribution in 2017, it showed that Asia has the highest number of social media users which accumulated around 54% of worldwide users and for Southeast Asia was reported accumulated 11% of worldwide users (Distribution of worldwide social media user by region, 2018). The effectiveness of using social media in marketing influenced development of positive relationship with consumers as it is easier to deliver the up-to-date information (Ismail, 2017). In addition, the activities in social media marketing such as entertainment, customization, and interactions are will make the consumers has a positive towards individual's intention (Kim & Ko, 2012). Social media have been utilised in various types of organisation which is ranging from profitable-making organisations to non-profit

organisations (Yadav & Rahman, 2017). For this study, the non-profit organization refers to Ministry of Health Malaysia (MOH).

Ministry of Health Malaysia (MOH) using the social media under the Organ Donation Strategic Campaign Plan since 2012. The ministry utilised social media in this campaign for disseminate information in order to raise society's registration as organ donors (Farhanah, 2017). However, there are issue of shortage that is stemming from the need for organ and the organ supply is considered a global problem that faced by most countries including Malaysia (Agarwal et al., 2018; Plana, Kimberly, Parent, Khouri, Diaz-Siso, Fryml, Motosko, Ceradini, Caplan & Rodriguez, 2018). According to global statistic of organ donor in 2016 for respective counties, Malaysia has the lowest registration per million which is 0.19% compared to other countries; Singapore is 4.74%, Thailand is 3.23%, Philippines is 0.21%, and way behind the top countries such as Spain is 43.8% (GODT, 2016). The total of organ donors in Malaysia since 1997 was 401,242 people which accounting for 1.35% of Malaysian population and it showed fluctuation instead of increasing constantly through the years (Farhanah, 2017).

Therefore, based on discussion above, it shows that substantial attention needs to be given in context of organ donation. Specifically, the impact of social media that used by Ministry of Health Malaysia (MOH) in promoting the campaign of organ donation. This paper aims to critically review the existing literature in context of social media and organ donation. The outcome from the review will guide in formation of conceptual framework.

Literature Review

Most of existing literature that delved in the social media context are concentrated on the aspect of profit organisation and there is little study being conducted that centred on the non-profit organisation element (Greenberg & MacAulay, 2009; Bortree & seltzer, 2009). Furthermore, Eyrich, Padman, and Sweetser (2008) revealed that it appears the non-profit organisation does not fully realise the potential of social media. In line with that discussion, the role of social media in a non-profit organization is to provide a medium to disseminate information to public whereby the information shapes the public's behaviour to support the organisation's agenda and increase trust in organisation (Waters & Jamal, 2011).

On other hand, there are several researches that demonstrated the important factor of perceived risk in relation to register as organ donors (Saleem, Ishaque, Habib, Hussain, Jawed, Khan, Ahmad, Iftikar, Mughal & Jehan, 2009; Cohen, 2010) but very few that centred on informational and promotional communication. Recently, Siminoff, Wilson-Genderson, Mosavel, Barker, Trgina, and Traino (2017) indicated there is a need for further study of perceived risk impacted in context of information of organ donation campaign which as outcome as the possibility become the organ donor. Therefore, in the next section, it is about the discussion about the effect of perceived risk towards the process of information adoption.

Perceived risk

Risk is defined as the issue which pervasive across inside country and also across national border that include issues in context of natural disasters, global infection diseases, hazards and many more (Paek & Hove, 2017). Meanwhile, the perceived risk defines as the individual belief of acquiring the loss in interest to achieve the favourable outcome

(Warkentin, Gefen, Pavlou & Rose, 2002). Perceived risk is related to the multi aspect of construct that is the potential financial risk, the performance risk, the physical risk and psychological risk (Jacoby & Kaplan, 1972). Kim, Ferrin, and Rao (2008) state that the perceived risk is about the existence of individual's perception that there will be potential of

negative effect in process to use or consumption the product. The perceived risk in this study refers to the individual perceive toward the significant risk that they will be facing regarding in context of organ donation.

`The significant influence of perceived risk to the changing of individual behaviour was widely recognized in context health behaviour (Sar & Anghelcev, 2013; Yarmen, Sumaedi, Bakti, Rakhmawati, Astrini & Widianti, 2016). The perceived risk is not same when compared to real risk because it is rooted from each individual's subjective cognition and has a vital impact toward human choice (Joffe, 2003). The example of perceived risk in context of organ donation that faced by people are fear for hospital procedure regarding the organ donation (Kent & Owens, 1995), worry about the identity of the family donor will be exposed (Siminoff et al., 2017), the issue relate the body damage during the transplant of organ (Wong and Chow, 2016; Cohen, 2010), issue related the perfect for the whole body (Poreddi, Sunitha, Thimmaiah & Math, 2017; Wong & Chow, 2016), fear the organ will be misuse and sell to other party (Hyde & White, 2010), the fairness allocation of organ (Boulware, Troll, Wang & Powe, 2007), and also fear or premature or unexpected death (Wong & Chow, 2016).

Perceived risk was found to have a substantial impact on individual in their decision making process for register as organ donors (Sam, Ganesh, Indrapriyadarshini, Jeyamarthan, and Nandhini, 2018). Additionally, for health communication in social media platform stated that the perceived risk was the important predictor for individual to searching or seeking the related information (Deng & Liu, 2007). The individual start to search using various methods to obtain the information when the individual facing a condition where the level of perceived risk is higher than the level of tolerance toward the risk (Mitchell, 1999). Perceived risk shows has a significant effect on the process of information adoption (Tseng & Wang, 2016) and toward the attitude of people (Algharabat, Rana, Dwivedi, Alalwan, & Qasem, 2018). Meanwhile, the information that disseminated through internet platform by government positively associated to influence people towards to using the information (Xie, Song, Peng & Shabbir, 2017).

In the health context, Klerck and Sweeney (2007) revealed that the perceived risk influences in a positive direction for people to seek and adopt information related to the health product that is the product is valuable to consumers. In addition, previous studies in context of social media that examined the aspect of healthy products revealed that perceived risk has a positive impact toward information usefulness (Hussain et al., 2017). They also discuss the people accepted the information as usefulness due to their acceptance of the information is valuable, informative and helpful. Similarly, the individual facing health risk showed had a positive relationship towards the usefulness of health information in online medium which improves the individual's knowledge and eliminate the negative emotions (Peate et al., 2017).

Media is frequently mentioned as a major source of information on organ donor registration and the attitude towards information toward media from a societal perspective is influenced by perceived risk such as organ exploitation (Ramachandran and Subitha, 2017). The perceived risk is discovered to be key predictor for the refusal to register as organ donor by people and the issue correlated with the negative influence on people's attitude (Agaba et. al, 2008). The authors suggested that with proper promotion intervention will change the perceived risk toward organ donation and influence to people for register as organ donors. However, there is lack of previous studies that investigate the relationship in context of social media and also internet.

Therefore, based on discussion above, it shows the importance of perceived risk in context organ donation as well as for adoption information process. In details, the perceived risk proposes to have positive relationship towards information usefulness and information adoption. Meanwhile, the perceived risk shows negative relationship with attitude towards information.

Attitude towards information

Summers, Matheson, and Conry (1983) stated that the importance and power of attitude toward information in the psychological construct which is this dimension is found able to differentiate the individual to performing certain task in favourable or not. Petty and Wegener (1998) defined attitude as individual's general evaluation towards a person, objects, or also an issue. They also mentioned that the attitude refers for someone feel how favourable or how unfavourable for some object or judgement. In addition, Goh and Chi (2017) discuss the attitude towards information significantly impacts in the process of individual to accept the information in order to make sound health related decision in context of online health communication process. Thus, this research is focuses in context of attitude of society towards organ donation information which disseminated through medium of social media.

Information and internet technologies are rapidly being utilised in the service sector in the information-dominated era, indicating the positive attitude towards information delivered by newer technology and the positive attitude leads to information use for particular tasks by citizens (Liaw, Huang & Chen, 2007). People developed favourable attitude towards information due to the technology's functions in collection and storing information and this information guides their actions in decision-making or for performing tasks (Secginli, Erdogan & Monsen, 2014). Therefore, based on argument above, the present study proposes that the attitude toward health information is positively affected towards usefulness of the information.

Information usefulness

According to Davis et al. (1989) defined the perceived usefulness as the degree to which a person believes that using a particular system would enhance his or her job performance. The importance of information usefulness in online platform was discussed as vital factor in the communication process which is the information that perceived as useful by people will be beneficial for them to reduce the risk that they facing for certain type of topics (Hussain, Ahmed, Jafar, Rabnawaz & Jianzhou, 2017). Therefore, based on the argument about the information usefulness, in such a manner will make people to be more frequently use and visit the social media sites that is if they perceived the information obtained from that social media is will increase their performance and directly help them for make sound decision (Lee, 2017).

Social media's design provides the platform for information dissemination to be done rapidly about organ donation either to patients or interested people which directly influences to increases their knowledge and clarify the misconception on organ donation (Chang, Anderson, Turner, Shoham, Hou & Grams, 2013). They also added that the increases knowledge and clarification misconception on organ donation because people accept the information as useful for them. In addition, the information usefulness is found positively impact toward information adoption in context of health information (Hussain et al., 2017). The process of adoption of information is in the form of the informational influence, its influence exerted on a person through the information they have accessed and received and such information is proven to be useful to them as well as useful if the information relates to

reality (Sussman & Siegal, 2003). Therefore, the current study proposes the information usefulness has a significant positive relationship with information adoption.

Information adoption

Information adoption refers to the degree of people that will accept the content of information that perceived as meaningful to them which is after individual process of assessing the content validity (Zhang & Watts, 2008). In line with that, there are arguments from previous studies that concluded the adoption of information and technology communication are not just influenced by an individual's internal process but also by the level of innovativeness of the technology (Hoo Yang, Lee & Lee, 2007).

Chaoguang, Feicheng, Yifei, and Yuchao (2017) highlighted the importance to give critical attention to the context of health communication and adoption of information among people which is mediated by social media platform. They added in discussion regarding critical attention is vital in order to ensure the health organisation stay updated and understand the communication process and also to keep the operational management aligned with the current changes in people brought by the changing approaches they seek and obtain from social media technology. Moreover, Erkan and Evans (2016) stated there is a positive impact in the relationship between the information adoption and intention which this studies examined in context of social media for disseminated information. Therefore, the current study proposes there is a positive relationship between information adoption and intention to register as organ donors.

Intention to register as organ donors

Intention also refers to the aspect of people that they will act based on their intention which is influenced by their own skill that their need to perform such behaviour and also by the situational factors which make that behaviour is possible to perform (Yzer, 2017). In addition, intention to register as organ donors relies on how the information is portrayal by mass media to overcome the myths about organ donation that is will impact positively on people to increase their intention to register as organ donors (Morgan et al., 2005).

Interestingly, a research that conducted by Stephenson et al. (2008) suggested that the major contributing factor in reluctance to register as organ donors is due to the issue of body integrity which is the individual wishes to keep their body as whole without missing some part of their own body for the purpose of organ donation. As such, this argument of the issue of body integrity falls in the context of perceived risk toward organ donation. As overall, the perceived risk found have substantial effect in the relationship with attitude towards information, information usefulness, and information adoption. Meanwhile, the information adoption is proposing have positive relationship towards intention to register as organ donors.

Propose framework

Based on critical review above, the researchers propose the framework as follows:

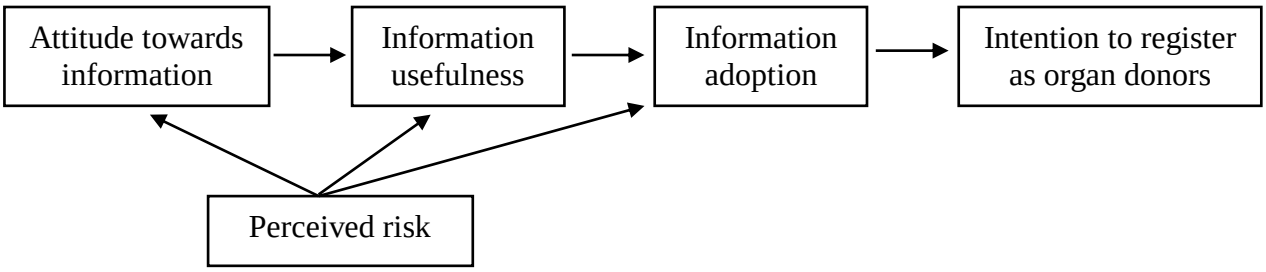

Figure 1: Propose framework

The literature review explains the formation of relationship and effects of perceived risk in the process of adoption information. The process consists of attitude towards information, information usefulness and information adoption. In addition, the perceived risk proposes to have positive relationship with information usefulness and information adoption. But, the relationship between perceived risk and attitude towards information is proposed as negative relationship. Meanwhile, the information adoption found positively impact toward intention to register as organ donors.

Conclusion

The perceived risk is found as an important factor for influencing in the process of individual's intention to register as organ donors after exposed by the information in social media platform. Additionally, the perceived risk proposes to gives significant impact to attitude towards information, information usefulness and information adoption. Meanwhile, information adoption has a significant positive relationship with intention to register as organ donors. The findings from this paper is expected will help the future researcher in understand the effects of perceived risk towards the individual communication process which through social media in context of organ donation. Moreover, the findings also will help the marketers to design sound social media marketing in context health communication as well as organ donation. As overall, the authors will use and extend the proposed research model as the framework for their future research.

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THE MANAGING CRITICAL LEAN WASTES USING RANKING METHOD FOR BETTER LEAN TOOLS SELECTION

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Abstract: *As Malaysia is growing rapidly towards industrialization, it is not hard to foresee the importance of implementing an effective lean tools to improve the productivity and contributes to the growth of industries. This study intended to determine the managing the critical lean wastes that impede the manufacturing performance in the selected food manufacturing company from Johor Bahru. Company X is a bakery production company that produced variety type of products such as cookies, biscuit, cake and others pastry. For the purpose of this study, ranking methods were used to determine the critical lean wastes and identify the suitable implementation of lean tools. The data collection instrument is using quantitative methods which distribute questionnaire to the target respondents using random sampling. Respondents are medium to high level production employees from different department in the company. The target population is 70 people, while the sample size is 58. The data were analyzed using SPSS software and result showed that the targeted food manufacturing company lean wastes were Waiting, Unnecessary Motion and Unnecessary Inventory. Beside this, the Single Minute Exchange of Dies (SMED) method were chosen to determine the critical lean waste in the company before identify suitable lean tools.This study were assisted the company to stay competitive in the industry.*

Keywords: *Lean Wastes, Food Manufacturing, Quantitative Methods, SMED*

Introduction

Lean manufacturing focuses on eliminating waste and non-value added activities in a process while maximizing the value-added tasks as required by the customer (Womack, 2003). Lean manufacturing emphasizes value creation by eliminating waste (Ibrahim, 2005). Waste is non-value added activities that con-tribute to product cost for which the customer is unwilling to pay. In lean manufacturing (Gurumurthy and Kodali, 2011), seven wastes have been defined as overproduction (Peter Hines and Nick Rich, 2007), Defects, Transportation, Waiting, Inventory, Motion, and Processing. Therefore, the study required identify the critical waste (Ibrahim, 2005) that faced by the food manufacturing company (Mahalik and Nambiar, 2010) and propose a suitable method that can reducing the critical waste to minimum possible level without impede the manufacturing performance (Chakravorty, 2010). Company x is a bakery production company that produced variety type of products such as cookies, biscuit, cake and others pastry. The manufacturing cycle starts with collection of required raw materials, preparing, cooking and mixing them according to the specified recipe (Shivanand,

2006). The raw material is subsequently formed into the desired shape. Baking is carried out after coating with powdery crumb materials. Finally, the products are cool and packaged ready for delivery or storing.

Problem statement

In the last decades, The approach of lean production for waste reduction and performance improvement has been gaining importance (Gurumurthy and Kodali, 2011; Taj and Morosan, 2011). However, very few amount of research is done in relation with lean manufacturing in Malaysia, which results in a lot of struggle for those lean companies in Malaysia who implemented the lean methodology into their operational processes (Watson, 2014). Only a few published works address the issue of whether lean manufacturing is suitable for the food processing industry (Mahalik and Nambiar, 2010; Scott et al., 2009).

Researches or literature related to lean in food manufacturing is very limited, thus, it can be implied that lean in food manufacturing is still new to Malaysia Food Industry context (Shivanand, 2006). As Malaysia is growing rapidly towards industrialization, it is not hard to foresee the importance of implementing an effective lean tools to improve the productivity and contributes to the growth of industries. Despite the difficulty to obtain literature or references on lean in Malaysia context, lean was still chosen as the study. The success of this study would be beneficial to the library of knowledge relative to lean in food manufacturing in Malaysia context (Upadhye Nitin et al., 2010).

A preliminary interview has been conducted with the production manager of Company x to identify if any problem related to production persists. According to the production manager, Company x does face some production issues in the recent months. The food production is based around a very heterogeneous group of products with different degrees of perishability, different manufacturing lead times, and different customers in different amounts at different frequencies (Gurumurthy and Kodali, 2011). The production manager also expressed the need for the immediate identification of the root causes that impede the productivity. Hence, a ranking method is suggested to company X to tackle the problems exists.

Research objectives

Research objectives of this study are as follows:

1. Determine the critical lean wastes in the food manufacturing company that impede the manufacturing performance by ranking the wastes

2. Identify suitable lean tool for manufacturing performance improvement to the food manufacturing company

Research scope

The study is intended to determine the critical lean waste (Ibrahim, 2005) and identify suitable lean tools for implementation in the selected company in Taman Perindustrian Cemerlang, Johor To make sure this research more effective and manageable, the research scope of this study focuses on the target respondent where they are the middle to high level of production employees in company X. Example:, production line leader, production supervisor, quality control officer, technician, production planner and production manager.

Methodology

Diagram of the flow process is established to ensure this study can be conducted smoothly. A few of number of stages can be found in the flow diagram. Firstly, the research problem is identified and the purpose of this research is for solving those problems. Secondly, using the secondary source which is review of the literature related to the topic for better understanding the concept and terms to be investigated in this research. Thirdly, construct the survey design for this study. After that, this study will undergoes the stage of the pretest for testing the suitability of the questionnaire. Questionnaire are distributed to the respondents after the correction have been taken. Next, data collected is analyzed by using SPSS software. Lastly, the process of interested result based on finding is combined and report. Figure 1 shows the flow chart for the research

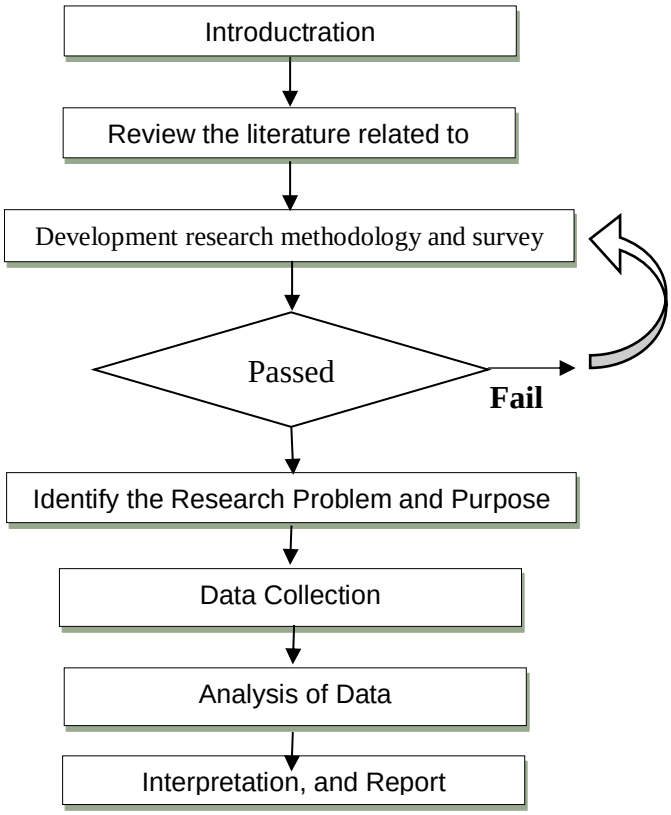

Figure 1: Research Flow Chart

Respondents

It is difficult to study a huge population: thus, sampling is essential when conducting a study. For this study, random sampling is used, based on Krejcie & Morgan (1970) table to determine the sample size. Random samples are samples in which each unit in the population has an equal chance of being selected (Krathwohl, 1998). In this study, the targeted population was 70 employees in the food production company in Taman Perindustrian Cemerlang, Johor. A total of 58 respondents were chosen randomly from that population.

Data collection Instrument

This study was carried out using a survey method and the tool for gathering data was a questionnaire made up of three sections. The first section in the questionnaire gathered

respondents' demographic information, while the second section gathered data determine the critical lean wastes in the food manufacturing company (Mahalik and Nambiar, 2010) that impede the manufacturing performance (Curtis and Wroclawski, 2009) using ranking method to identify waste modes in lean production systems (Chakravorty, 2010). Third section involved gather the opinion about the lean tools that suggest for the improvement. The first instrument is measurement of the likeliness of occurrence (Mika, 2006). Rating on a scale from 1 to 5, where 1 is very rare occurrence and 5 is very frequent occurrence. When respondent answer the questionnaire, they specify their level of occurrence on a symmetric scale for a series of statements. The second instrument is measurement of acceptance to the method suggested using Likert Scales which 1= strong disagree until 5= strong agree Krejcie and Morgan, 1970).

Data Collection Procedure

Researcher explained to them about the purpose of conducting this study and will assist for those who have problem to understand the questionnaire in order to answer the questions. Lastly, the questionnaire sheets were collected after they answered and counted to make sure most of the questionnaire sheets are collected.

Data Analysis

Data being collected was analyzed using Statistical Package for Social Science (SPSS) version 22.0. SPSS is a type of software that helps in managing and analyzing large number of data by creating fast and accurate result in the forms of tables and graphical charts. Descriptive analysis was used to describe the data and characteristics about the population or phenomenon being studies (Neuman, 2012). Mean value will be used for identify the ranking of the critical lean wastes (Ibrahim, 2005). Using mean as well to determine the second objective.

Research Results

Summary of analysis on Lean wastes

The Table 1 above shows the average mean score of the seven Lean Wastes (Ibrahim, 2005) that is being determined by the middle and high management production members in the company. The highest mean shown here are Waiting with the value of 4.0345, followed by Unnecessary Motion at the second place with value of 3.9914. Third place is Unnecessary Inventory with value of 3.4483. Thus, the critical Lean Wastes in the production company are Waiting, Unnecessary Motion and Unnecessary Inventory (Chakravorty, 2010). The first objective is achieved.

Lean Waste	Average mean	Ranking
Waiting	4.0345	1
Unnecessary Motion	3.9914	2
Unnecessary Inventory	3.4483	3
Overproduction	2.6466	4
Defect	2.3621	5
Excessive Transportation	2.3017	6
Inappropriate Processing	1.8104	7

Table 1: Summary of Analysis on Lean Wastes

Critical Lean Wastes

Waiting

The Table 2 showed the descriptive statistics for the Waiting. The both two statement of excessive waiting obtained a high mean score which means that most of the respondents are agree with these both statements. The means score of Long period of machine set up time and die changing for next operation are 4.0345. The average mean score of excessive waiting are 4.0345.

Statement	Mean	Interpretation
Long period of machine set up time	4.0345	High
Long periods of die changing for next operation	4.0345	High
Average Score	4.0345	High

Table 2: Mean Score for Waiting

Unnecessary Motion

The Table 3 showed the descriptive statistics for the Unnecessary Motion. The both two statement of unnecessary motion obtained a high mean score which means that most of the respondents are agree with these both statements. The means score of long period of hand motions in an assembly process were 3.9828 while long period of machine set up and material handling is 4.0000. The average mean score of Unnecessary Motion are 3.9914.

Statement	Mean	Interpretation
Long period of hand motions in an assembly process	3.9828	High
Long period of machine set up and material handling	4.0000	High
Average Score	3.9914	High

Table 3: Mean Score for Motion

Unnecessary Inventory

According to the Table 4 indicated that the Mean value for excess of in-process inventory and finished goods inventory are located in the medium mean range. The mean score for Excess of in-process inventory is 3.5000 while excess of finished goods inventory is 3.3966. The result show that moderate of respondents are agree with these both statements.

Statement	Mean	Interpretation
Excess of in-process inventory	3.5000	Medium
Excess of finished goods inventory	3.3966	Medium
Average Score	3.4483	Medium

Table 4: Mean Score for Inventory

Lean Tools Selection

The Table 5 shows average mean score of each lean tools. Majority respondent agree that Single Minute Exchange of Die (SMED), able to improve the critical lean waste in the food manufacturing company (Mahalik and Nambiar, 2010). The mean value of SMED is 4.2241 which is highest among other lean tools where followed by Just in time (JIT) with 4.0345 and value stream mapping (VSM) with 4.0000 (Lee, 2001).The forth ranked lean tool is 5s (Ghodrati and Zulkifli, 2013) with 3.9828 mean value. The overall equipment effectiveness (Dal., 2000) is located in fifth with mean value of 3.7586. The highest ranking of lean tools will be proposed to the company for implementation and second objective achieved.

Lean Tools	Mean	Ranking
Single Minute Echange of Die	4.2241	1
Just in time	4.0345	2
Value Stream Mapping	4.0000	3
5S	3.9828	4
Overall Equipment Effectiveness(OEE)	3.7586	5

Table 5: Summary of Analysis on Lean Tools

Discussion and Conclusion

In this section, the findings from chapter four will be thoroughly discussed here. The following subchapters, discussions were done to answer the study questions stated for this study.

Critical Lean Waste

When different types of waste have been detected and identified, it is necessary to prioritize in what order to solve these predicaments. Data collection on the lean wastes indicated that Waiting, Unnecessary Motion, Unnecessary Inventory represented the high waste areas (Ibrahim, 2005).

Waiting

From the data collected, most of the respondent agree that long period of machine set up and long period of die changing for next operation occurred frequently during production running. A rapid and efficient way of converting a manufacturing process (Gurumurthy and Kodali, 2011) from running the current product to running the next product will be required to tackle this problem. The rapid changeover is key to reducing production lot sizes and thereby improving flow (Ferradás and Salonitis, 2013).

Unnecessary Motion

From the data collected, unnecessary motion is the second ranking of the critical lean waste in the company. Majority of the respondents agree that there are Long period of hand motions in an assembly process, machine set up and material handling process. Motion consumes time and energy. It is essential to eliminate all motion that does not add value, such as stretching for tools and moving materials within a station (Mohammed Sufian AbuShaaban, 2012). This objective should be guiding when designing workplaces, processes, operation procedures, etc. Reducing waste as the result of unnecessary motion encompasses everything from describing detailed hand motions in an assembly process to the selection of machines and design of fixtures to reduce the time for set-ups and material handling (Mohammed Sufian AbuShaaban, 2012)

Unnecessary Inventory

From the data collected, Unnecessary Inventory obtained the third ranking of the critical lean waste (Ibrahim, 2005) in the company. Majority of the respondents agree that there are excess of in-process inventory and finished good inventory in the warehouse. Keeping parts and products in inventory does not create any extra value for them. When this occurs, it only hides the problem and prevents a solution. Additionally, keeping inventory means higher tied up capital. However, it is not advisable to eliminate inventory mindlessly. Instead, the reason for the existence of the inventory must first be found (Karlsson and Åhlström, 1996). Two types of inventories are existed: work in process (WIP) and parts storage. WIP are the parts stored between each process and parts storage are the raw material which were brought from the main ware house to the production area to be processed. Lean manufacturing always emphasizes on reducing inventory. This can be done either by reduction of buffer inventory or the reduction of batch sizes, or both. Buffer inventory is reduced by eliminating unwanted variations (Shivanand, 2006).

Lean Tools

In order to eliminate (Mohammed Sufian AbuShaaban, 2012) or reduce the wastes that impact to production efficiency (Dal., 2000) the suitable lean tool are selected for implementation which are Single Minute Exchange Die (SMED). The food manufacturing industries are characterized by wide range of product mix, frequent changeover in the production line and shorter production runs (Upadhye Nitin et al., 2010). In some food processing operations such as in this case company, one product does not run through a particular production line everyday rather multiple products are manufactured even in a single day. This shorter production run means frequent changeover, which leads to increased machine down-time and labor hours. Single Minute Exchange of Die (SMED) is a lean tool, which can dramatically reduce the changeover or set-up time (Ferradás and Salonitis, 2013).. Set-up time is defined as the time between the last good piece off the current run and the first good piece off the next run. Several SMED activities were carried out at the packing and forming areas. Using Video analysis and reviewing the process, the changeover time in the forming machine was significantly reduced (Ian Kennedy et al., 2013).

Benefit of SMED

Single Minute Exchange of Dies (SMED): Globalization has created the need to produce small lots, causing a significant increase in the frequency of setup, causing the reduction of times production for each lot (Ferradás and Salonitis, 2013). For this reason it is important that changeovers are quick, so that the flexibility of respond to demand is not affected (McIntosh et al, 2007).Shingo defends that SMED system is a method that includes a set of techniques that makes it possible to have a setup less than 10 minutes, that is the number of minutes expressed by only one digit (Shingo, 1985) The single minute exchange of dies is one important lean tool to reduce waste and improve flexibility in manufacturing processes (Shivanand, 2006) allowing lot size reduction and manufacturing flow improvements (Gurumurthy and Kodali, 2011). SMED reduces the non-productive time by streamlining and standardizing the operations for exchange tools, using simple techniques and easy applications (Ferradás and Salonitis, 2013).

Conclusion

Throughout the long process of learning in the completion of final year project, a great deal of knowledge about lean has been accumulated (Chakravorty, 2010). Lean as discussed in

most pages of this chapter. It is learned that Lean provides many benefits and with proper implementation, lean can serve as a tool to elevate the company's competitiveness in the industry (Kennedy et al., 2013). The food manufacturing industry provides a particular challenge to the adoption of lean manufacturing due to the inherent nature of food perishability another unique characteristics (Mahalik and Nambiar, 2010). It is necessary to determine the critical lean waste (Ibrahim, 2005) in the particular company before identify suitable lean tools to implement. SMED lean tool is suggested to Company X for implementation as it is suitable and there are similar previous study proved that for the lean tool is applicable (Chakravorty, 2010).

Future Study

Since the present study is exploratory in nature and it is limited to a case study in a Malaysia-based company, it would be beneficial for the future researcher to conduct the study in mode of multiple case study where generalize-ability can be tested. The multiple case study can be done on companies across other food industry (Upadhye Nitin et al., 2010). Such participation of companies from diverse food sectors or industries will increase the significance or usage of the study. Last suggestion for future study is the design of detail implementation of SMED to food manufacturing company who faced similar issue or problem. By doing so, the study can gain more in depth information or knowledge on the related issue.

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THE CONCERNS ON FOOD SAFETY INFLUENCES DOMESTIC TOURISTS' FOOD NEOPHOBIA TOWARD KADAZANDUSUN TRADITIONAL FOOD

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***Abstract**: Gastrotourism is a major component of a country's tourism activity and traditional food is one of its core products. However, food safety concerns and food neophobia in tourists has become an obstacle in effectively promoting local traditional foods. The objective of this study was to measure food neophobia and food safety concerns in domestic tourists toward Kadazandusun traditional food. A total of 600 domestic tourists from Peninsular Malaysia were recruited from places frequented by tourists and shopping malls in Kota Kinabalu city. They completed self-administered questionnaires on food neophobia and food safety concerns. Most respondents had medium levels of food neophobia. They were cautious and a little reluctant to try traditional Kadazandusun food because they were unfamiliar with the food, and they did not trust the food safety aspects in its preparation. The tourists' religious background and taste preferences were also factors that influenced their acceptance of this traditional food. In conclusion, to help tourists appreciate Kadazandusun traditional foods, there are rooms for improvements in their presentation, incorporation of fusion cooking, and increasing efforts to promote them through mass media.*

***Keyword(s)**: Kadazandusun, Traditional Food, Food Neophobia, Food safety*

Background of study

Sabah, one of the largest states of Malaysia, is situated at the northern part of Borneo and has become a popular holiday destination for both international and domestic tourists. With its impressive geographical locations and diverse natural resources, Sabah tourism and hospitality industry has developed into a valuable income generator as it was indicated by the increase of 11.8% on inbound tourists with the estimation of income of MYR 6.4 billion for 2017 (Han, 2017). Besides good accommodation and transportation, food and beverage also play an important role in building a memorable travel experiences (Jalis, Che & Markwell, 2014; Quan & Wang, 2004; Santich, 2003;Yusoff, Zahari, Kutut & Sharif, 2013).

Food is inseparable with culture and heritage of an ethnic group. Gastrotourism is regarded as one of the main components in the wholesome delivery of cultural tourism. Through gastrotourism, a visitor is able to explore and experience the uniqueness of a location or a community (Ivanova, Terziyska & Trifonova., 2014; Sapawi, Ng, Azizan & Ooi, 2017; Williams, Williams Jr. & Omar, 2014). Thus, this reflects that there is another important role of a country's food and beverage industry other than fulfilling tourists' basic necessities. Traditional food of an ethnic group is regarded as a valuable national and cultural treasure. Traditional ethnic food can represent the inheritance of old knowledge, ethnic rituals, local available resources as well as common practices of food preparation. Hence, traditional ethnic food have become an essential product of a country's gastrotourism industry.
In Malaysia, Sabah traditional food is unique as the cuisine offers distintive flavours develop from the indigenous ingredients that are only available in Sabah. In spite of its uniqueness, Sabah traditional food is unfortunately less popular compared to its marine products, which being favoured as the main attraction to tourists who visit Sabah (Md Zain, Mohd Zahari, Hanafiah & Zulkifly, 2015). As stated by Grunert and Valli (2001), foods that are unfamiliar or novel can repel consumers from trying it as to protect themselves of potential health risks. This will lead to high probability of tourists to check out Sabah traditional food from their must-do list. Moreover, few promotional effort has been done highlighting Kadazandusun traditional cuisine (Tey, 2013). The flavour of the dishes and seasonal native food ingredients contribute to the difficulties of showcasing the cuisine in media and food exhibitions compare to other Malaysian ethnic cuisines.

On top of that, there is a lingering concern on food safety that can affect on the tourists' willingness to try Sabah traditional food as food safety is still an on-going issue in Malaysia. In the past decade, the awareness on health issues related to food consumption began to increase especially in developed countries (Purnomo, 2006). Nevertheless, this will effect on the demand on face and nutritious food, as well as on the acceptance of consuming novel foods or beverages. The concern of food safety is known to be one of the main components in food neophobia. It is natural for tourists to be cautious toward risks of foodborne illnesses during their travels (Amuquandoh, 2011; Torres & Skillcorn, 2004). Rationally, most tourists have short period of stay and want their vacation to be uninterrupted by avoidable sickness. In order to prevent such sickness, it is normal for concerned tourists to exclude unfamiliar foods and unrecognized food providers from their holiday itinerary. However, the avoidance of consuming traditional food is common among tourists as it is one of the natural response towards unfamiliar foods. This behaviour is also referred as food neophobia and it impacts on the tourists' acceptance of traditional foods. The purpose of this study, therefore, was to measure the level of food neophobia among domestic tourists on Kadazandusun traditional food and to investigate their food safety concerns in regards of consuming the said traditional food.

Kadazandusun traditional food

The Kadazandusun is the largest ethnic group in Sabah comprising of 40 subgroups as recognized in by The Kadazandusun Cultural Association (KDCA) constitution (Kadazandusun Cultural Association, N.A) and it is predominantly practiced Christianity (Barlocco, 2014). The large representation of the ethnic group is visible on the offerings of most dishes for Sabah traditional cuisine. Fermented, cured and pickled foods (Anon, 1990); Junidih, 2015), as well as insects (Chung, 2010) are common dishes in the traditional Kadazandusun cuisine.

Noosom, or pickling is one of the popular ways of preparing and preserving native food ingredients such as *Bambangan (wild mango), Tuhau, w*ild game and local freshwater fish with the addition of *Pangi* seed (*Pangium edule*), an ingredient also used in Indonesian and Peranakan cuisine. Wild vegetables and herbs are included in Kadazandusun dish and are consumed fresh or prepared in other dishes.

Besides pickling, the Kadazandusun also consumes insects such as *Butod (Rhynchophorus ferrugineus),* a common beetle larvae that survives on decaying Rumbia or Sagoo tree (Chung, 2010). This larvae is commonly prepared by stir-frying or eaten raw. Other insects in Kadazandusun, Murut and Rungus diet are crickets, honey bee brood, grasshoppers, rice bugs, cicadas and even, termites (Chung, 2010). Insects have become a part of the Kadazandusun traditional food because of its availability, inexpensive to acquire and an excellent substitute source of protein other than meats or fish.

In comparison to the three main ethnic Malaysia cuisine, the taste of Kadazandusun traditional food is more towards milder taste, with less use of spices and oil as well as frequently utilizes boiling and grilling cooking methods. According to Renata (2017), salty, sour, pungent and tangy are the main flavour notes of this cuisine in reference to the common preparation and ingredients used.

Food safety concerns on traditional food

Food is an essential necessity for survival and the same time, it can be one of the causes of diseases and even death if it is contaminated. Food safety encompasses on cleanliness in the process, preparation or handling of foods as to ensure that it is safe to eat (Griffith, 2006). Consumers from different socio-economic status and cultural background have different degree of tolerance toward the cleanliness in food preparation. Cossen and Gin (1994) had stated on the country's water quality can be the main cause for food-related health risks as unclean water able to contaminate food. Similar situation can be observed on underdeveloped countries as the inability to have access to clean water and lack of knowledge on food safety practices have led to widespread of foodborne illnesses.

Several cases had been reported regarding on unsanitary practices of preparing and handling foods at local restaurants in these recent years despite of the country's implementation of food safety regulations for foodservice operation. Furthermore, as explained by Health Ministry's Food Safety and Quality Control Division deputy director Ahmad Nadzri Sulaiman, most Malaysians have the attitude to dismiss on visible threats on food safety in any foodservice outlets they have visited to buy food from (Azizan, 2013 November 17). Fein, Lin and Levy (1995) mentioned that consumers with high education level and had experiences with foodborne illness were discovered to be less sensitive toward risky foods. Similar to this, Asiegbu, Lebelo and Tabit (2016) found out that consumers with higher education level also tend to exhibit low awareness on food safety and microbial hazards in purchasing street food compared to lower educated groups.

Food neophobia

Food neophobia is referred to as the reluctance and avoidance of trying or consume new foods (Pliner & Hobden, 1992; Barrena & Sanchez, 2012). This food personality trait functions as an automatic response to protect oneself from potential harm of consuming unfamiliar food or substances. However, food neophobia limits the individual's food choices and may contribute to nutritional deficiency especially among children. The Food Neophobia scale (FNS) was developed by Pliner and Hobden (1992) to test the individual's willingness

on consuming new foods. The socio-demographic factors able to influence an individual's food neophobia level. From previous studies, it was found that the level of this food-trait personality varies according to the consumer's age (Ozgen, 2014; Pliner & Salvy, 2006; Stratton, Vella, Sheeshka & Duncan, 2015). Young consumers are less neophobic and tend to be more adventurous eaters than their older counterparts as they are more eager to gain new experience by trying new foods.

Consumers with high education and have substantial income have low food neophobia tendencies (Choe & Cho, 2011; Siegrist, Hartmann & Keller, 2013; Tourila, Lähteenmäki, Pohjalainen & Lotti, 2001) The tertiary education provides condusive environment for cultural exchange and interaction among different ethnic groups. In addition, the difference of ethnic backgrounds have the effect on the consumer's food neophobia level (Muhammad, Abdullah, Zahari & Sharif, 2015).

Research Methodology

This study was a quantitative and cross-sectional research. The surveys were using standardized self-administered questionnaires and distributed at well-known tourist spots and shopping malls around Kota Kinabalu city. A total of 600 dual-language questionnaires were distributed and all of them provided usable data to the study. The questionnaire was slightly modified from previous study on food neophobia (Pliner & Hobden, 1992) and study on food safety concerns by Amuquandoh (2011) and Muhammad *et al*.(2016). There were 14 closed-ended questions with different sections to investigate food neophobia and food safety concerns toward Kadazandusun traditional food. All of the questions are measured using 7-likert scale. The socio-demographic data were also gathered from the respondents such as age, gender, ethnicity, state of origin, religion, education level and annual income level.

The study population involved domestic tourists, who were visiting Kota Kinabalu. The survey distribution was performed during the months of tourist peak season which start in the month of March 2018, May 2018, August 2018, November 2018 and January 2019. The study used purposive sampling method as it required respondents that fulfill certain set criteria. Trained numerators approached respondents with matching criteria and had tried or dine at any Sabah ethnic restaurant around Kota Kinabalu.

The data obtained from the survey was, then, analyzed using SPSS 21.0. Classification based on average scores on the FNS scale were performed as to identify the level of food neophobia that the respondents have (refer Table 1). Similar classification was used in previous studies on measuring consumer food neophobia (Choe & Cho, 2011; Olabi *et al*., 2009; Ritchey *et al*., 2003; Tuorila *et al*., 2001). Each of the item of the FNS scale is value as scores of 10 to 70. The scores will be later obtained from the median of the total scale.

Table 1 Food neophobia median score categories

FNS score marks	Food Neophobia Categories
10.0-24.4	Neophobic
24.5-42.5	Neutral
42.6-70.0	Neophilic

Research Findings

The demographic profile results from the finding (Table 2) showed that majority of the respondents are from Selangor with 20.2%, followed by respondents originated from Johor

with 15.3% and not more than 40% are from Pulau Pinang. Most of the respondents were female with 57.8% and 42.2% were male. Majority of the domestic tourists who had participated from the age group of 21-30 with 39.5%, followed by age of 31-40 with 30.8% and age group of 41-50 with 20%. 9.7% of the respondents are within the age of 51 to 60 years old. From the profile, most of the participated respondents are Malay with 44.7%, followed by Chinese with 41%, Indian with 13% and other ethnicity with 1.3%. Evidently from the number in ethnic group, Malay respondents represent the number of Muslims in the study.

Table 2 Socio-demographic characteristics of the respondents

Category	Total (n)	Percentage (%)
State of origin		
Selangor	121	20.2
Johor	92	15.3
Kuala Lumpur	79	13.2
Perak	60	10.0
Negeri Sembilan	60	10.0
Kedah	54	9.0
Melaka	48	8.0
Perlis	46	7.7
Pulau Pinang	40	6.7
Gender:		
Male	253	42.2
Female	347	57.8
Age:		
21-30	237	39.5
31-40	185	30.8
41-50	120	20.0
51-60	58	9.7
Ethnic group:		
Malay	268	44.7
Chinese	246	41.0
Indian	78	13.0
Others	8	1.3
Religion		
Islam	269	44.8
Buddha	180	30.0
Hindu	72	12.0
Christian	71	11.8
Sikh	2	0.3
Others	6	1.0
Educational level:		
No formal education	5	0.8
Primary level	32	5.3
Secondary level	160	26.7
Undergraduate	373	62.2
Postgraduate	30	5.0
Annual income (MYR):		
<12,000.00	124	20.7

12,000.00 – 59,999.00	367	61.2
60,000.00 – 120,000.00	92	15.3
>120,000.00	17	2.8

Meanwhile, 30% of respondents who are buddhist, 12% who are hindu, 11.8% of respondents who are Christian, other religion backgrounds with 1% and Sikh with only 0.2%. It also showed that a large number of the participated domestic tourists are highly educated, with 62.2% holding undergraduate certificate and 5% have completed their postgraduate studies. 26.7% of the respondents only obtain secondary school certificate, was followed by those own primary school education with 5.3%, and 0.8% of the respondents who do not received any formal education.

The analysis on classification of food neophobia level found that the respondents have medium levels of food neophobia (*Mdn* = 34.0). The below and upper quartile had shown the FNS scores are 27 and 44. Based from the FNS (Table 3), the item "I would eat almost all types of food" had the highest mean (*M* = 5.24, *S.D* = 1.511). This correponded to the average level of respondents' food neophobia. However, the item "I do not like traditional foods from other places or country" had obtained (*M*= 4.84, *S.D* = 1.530) and item "I am not willing to try any new traditional foods" with mean 4.73 (*S.D*= 1.545) had contradicted to the result of the previous item. However, the item "I rarely try new traditional food" (*M*=3.61, *S.D*=1.759) shown the respondents do try new traditional foods while being very cautious toward in doing so especially on more exotic and foreign traditional food.

The result on item "I would not try any new traditional food during travelling because I am worry that it will not be safe" (*M*=4.63, *S.D* = 1.558) and item "I do not trust on Kadazandusun traditional food because I do not trust of its cleanliness" came in next with mean of 4.56 (*S.D*=1.579). It led to the analysis result on item "I am very fussy towards traditional foods" (*M*=4.35, *S.D*=1.545) and to the results on reluctance towards the unfamiliar with the item "I will not try it if I do not know it" (*M*=4.32, *S.D*= 1.665).

Table 3 Mean, mode and standard deviation for items in FNS scale

Items	Mean	Standard Deviation
1. "I rarely try new traditional food"	3.61	1.759
2. "I will not try it if I do not know it"	4.32	1.665
3. "I do not trust on Kadazandusun traditional food because I do not trust of its cleanliness"	4.56	1.579
4. "I feel afraid of food that I have not tried before"	4.22	1.665
5. "I do not like traditional foods from other places or country"	4.84	1.530
6. "I think Kadazandusun traditional food is too weird to be consumed"	4.08	1.618
7. "I would not try any new traditional food during travelling because I am worry that it will not be safe"	4.63	1.558
8. "I would eat almost all types of food"	5.24	1.511
9. "I am very fussy towards traditional foods"	4.35	1.545
10."I am not willing to try any new traditional foods"	4.73	1.545

In addition of reluctancy to try, the result for item "I think Kadazandusun traditional food is too weird to be consumed" (*M*=4.08, *S.D*=1.618) shown there were respondents do believed that the Kadazandusun traditional food are not presentable or too exotic for consumption. As on food safety concerns (Table 4), the item "I can prevent any disease and remain healthy by not trying Kadazandusun traditional food" (*M*=4.58, *S.D*= 1.560) had the highest mean in food safety concerns. This result reflects on the results achieved for each items in the FNS scale. From result of item "Fear of illness deters me from eating Kadazandusun traditional food" (*M* = 4.30, *S.D*= 1.583), the respondents shown the same pattern of being careful in approaching new foods and avoiding those that are seen to be harmful to health. The suspicion of containing allergens (*M*= 4.14, *S.D*= 1.630) was seen as a possibility as Kadazandusun traditional food does include various protein sources from local seafood, freshwater fish, insects and wild indigenous plants.

Table 4 Mean, mode and standard deviation for items on Food Safety concerns

Items	Mean	Standard Deviation
1. "Fear of illness deters me from eating Kadazandusun traditional food"	4.30	1.583
2. "I have suspicion that the Kadazandusun traditional food contains ingredients that cause me to have an allergic reaction and this discourages me from trying it"	4.14	1.630
3. "The unpleasant display of Kadazandusun traditional foods prevent me from eating it."	4.03	1.647
4. "I can prevent any disease and remain healthy by not trying Kadazandusun traditional food"	4.58	1.560

item "The unpleasant display of Kadazandusun traditional foods prevent me from eating it" had scored the lowest (*M* = 4.03, *S.D* =1.647) in the food safety concern dimension. It reflected the respondents of seeing the food as weird or not that appealing.

Conclusion and Discussion

From the findings, despite of the domestic tourists' food neophobia is at medium level, these tourists are still cautious and even had displayed a certain degree of reluctance to try Sabah traditional food especially Kadazandusun cuisine. Based on the obtained demographic data, the respondents were largely young Malay tourists, who are muslim and own a higher education degree. With majority of them within the middle income range, the idea of spending the holidays at a local tourist location is often seen as an inexpensive alternative as they can cut their costs in terms of accomodation, food and transportation (Chiu, Ramli, Yusof & Ting, 2015).

Food safety concern becomes one of the factors influencing on the willingness to try new traditional foods. Issues and effort on awareness towards food safety travelled fast through social media, which becomes the most effective information exchange platform up to date. Philip (2015) stated that Malaysian consumers are likely to accept food safety better through this media medium besides the formal education receive from education institutes. With the recent cases of food safety violation cases happened in Malaysia, Malaysians are becoming careful on the foods they eat. Consumers' perception of risk can be resulted from the limited access on information regarding the unfamiliar ingredients used in the cuisine. Fischer and Frewer (2009) had suggested that the act of sharing and presenting information the food's benefits and attributes, which in this case Kadazandusun traditional food ingredients, can encourage the consumers' development of familiarity. Positive expectation on quality can be created with the aid of images or pictures included with the information (Piqueras-Fiszman & Spence, 2015)

Besides the concerns on food safety, religious beliefs and practices play important role in selecting and accepting food and beverages (Khan, 1981). As for muslim travelers, it became an advantage to travel domestically as this allows easy access to familiar and Halal certified foodservice outlets. However, the uncertainties can be invoked from knowing that the food that are prepared by foodservice outlets handled by owners with different religion practices. Food taboos and prohibited ingredients based from religious teachings can contributed to the natural adversion towards certain dishes and meticulous food selection. For instance, the act of eating *Butod* (Sago larve) is forbidden by the teachings of Islam (Paran, 2015 February 06) and most Buddhist followers practice vegetarianism (Grygus, 2008). According to Battour, Ismail and Battor (2010), availability of Halal food and beverage are the top elements of consideration in choosing a travel location for Muslim tourists.

Furthermore, the taste acceptance for foods are taken into account as the mildness flavour of Kadazandusun traditional food does not appeal to most domestic tourists from Peninsular Malaysia. Peninsular Malaysians are more familiar toward the flavours of the three country's main ethnic cuisine; Malay, Chinese and Indian. Nur-Syuhada, Fadzilah, Khairunnisa & Rosmaliza (2015) provided a description on Malay cuisine, which highlights the cuisine to have dishes with very strong, spicy, rich and aromatic flavours due to usage of various herbs, spices and cooking methods. Other than taste, the Kadazandusun traditional food's appearance and presentation are, too, added into the vital element of its acceptance. Colour composition and plating style improve food acceptability among targeted consumers (Deroy, Michel Piqueras-Fiszman & Spence, 2014; Stewart & Goss, 2013) Therefore,

Kadazandusun traditional food providers were recommended to revamp the way of presenting the cuisine as to increase its appeal to their intended customers.
In short, extensive promotional effort, positive information sharing and the improvement on food safety can boost the acceptability of Kadazandusun traditional food. It is encouraged that these traditional food providers should look into providing Halal Kadazandusun traditional dishes for tourists as the demand for more Halal food and beverages are growing exponentially over the years.

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EVOLUTION OF AFFORDABLE HOUSING POLICY IN MALAYSIA

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Abstract: *Housing sector has always been one of the main agenda in any developing countries. Housing provision is more than often been the issue that needed urgent emphasis. Depending on the economic system practiced, some countries practices interventions to achieve its socio economic goals. In a mixed economic system, housing provision in Malaysia is significantly affected by both public and private sector. The urbanization level in Malaysia has increased significantly from 34.2% in 1980 to 71% in 2010, 75% by the year 2020, and up to 80% by 2030. This will significantly increase the population hence demand for housing. Issues on affordability for those in the B40 and M40 to purchase house is prevalent and has becoming more crucial in recent years. Housing policy has been formulated since after independence to address issues in housing sector. Therefore, a look into affordable housing policy will give a deeper understanding on this subject. The objective of this paper is firstly to understand the current scenario of the housing affordability issue in Malaysia. Secondly to analyse the policies on affordable housing through significant milestone in the policy evolution and finally to identify the way forward in affordable housing policy. A literature on various medium, either through previous studies, publication and mass media will give some insights on the affordability scenario. A content analysis on secondary data on past and current housing policy will give understanding on the affordable housing policy evolution lastly, expert interviews with some stakeholders will give verification to the findings. The conclusion of this paper indicates that affordability issue is crucial and some significant milestone in housing policy formulation showed that encouraging efforts on affordable housing provision is in the pipeline. Conclusion will highlight the way forward for the affordable housing policy in Malaysia.*

Keywords*: Affordability, Housing Policy, Way Forward*

Introduction

Rapid urbanisation has led to an increase in population in urban areas. According to Shuid (2016), based on the Department of Statistic report (2010) the urbanization level in Malaysia has increased significantly from 34.2% in 1980 to 71% in 2010. The urbanization level is expected to increase to 75% by the year 2020. This will lead to an increase in the middle income population in urban areas. Eventually, this will create more demand for housing especially affordable housing. The need to provide for housing for the population is becoming more crucial as the main provider are from private sectors or private developers and is termed as market housing. Current issues that are prevalent in the housing industry is on affordability of various market segment to purchase a house. (Khazanah Research Institute, 2015). Housing should be accessible to the general population regardless of their income level. Access to housing could mean, owning or renting an accommodation unit. In

the sphere of housing provision, depending on the types of housing be it ownership or rental, both public and private sector plays their respective roles to fulfill the need and demand of all level of society. However, from RICS (2008) the situation in Malaysia is that home ownership is favoured with the rate of ownership stood at 85%, public housing at 7% and private rental housing at 5.55%. This is as recorded in 1998. According to the latest available official figures, Malaysia has a home ownership rate of 72.5%. (Khazanah Research Institute, 2015). Ownership is still preferred by the general population as it embodies more benefits for both social and economic wellbeing and a bigger part of the population is concern about home ownership thus giving the rise for the need to ensure that housing is accessible and affordable to all level of society. Affordability issues echoes the need for some kind of interventions from public sector to ensure equal access to housing for all segments of the population. Malaysia has shown some favourable intervention mechanism, such as policies to achieve its physical and socio economic objectives. In the context of this paper, programmes and efforts in the housing industry will be highlighted. This paper will be divided into four sections to discuss on literature review, current housing scenario, housing policy evolution and conclusion.

Literature review

Affordable Housing

"Housing" is both used as a noun and a verb, where it can be described as a thing and an activity; it is both a process and "end product" (King,2016; Reeves,2014). It can also be called a collection of dwellings and the process and activity of providing, managing and maintaining. (King,2016). It is a valuable commodity or service which can be something which meets both essential need and luxury (Reeves,2014). "Affordable housing" refers to the financial affordability of housing with respect to the occupants' incomes, as opposed to certain types of housing such as "social housing", "public housing" and "low cost housing" (UN Habitat 2011) . Therefore, affordable housing encompasses an array of housing within various price range which relates to effective demand . Effective demand is usually associated with the requirement of individual households over and above the basic or minimum level of provision or `need', supported by the household willingness to pay for housing by considering the ability to pay which actually back up by the purchasing power of each household. (Golland & Blake, 2007). This is when people are willing and able to pay for housing; therefore they are concerned with a) preferences at a price and b) the conditions of demand – the level of income, income distribution, household formation, the rate of interest, the price of substitutes, government policy, changes in taste, expectations of future price changes and so on (Harvey & Jowsey, 2004).

Affordability to purchase houses is using the median multiple as a common metric. This is done by dIviding the median house price by aggregate annual median Household income (Shlomo,2014; Diwa Samad et. al,2016; Khazanah Research Institute,2015). Affordability is rated on a scale of 0 to 5. The 3.0x median multiple signs that the market delivers a distribution of housing that are subjected to minimal distortions – urban land prices and speculative housing market.

This is generally apparent in developing countries all around the world. (Hamzah,2012). Housing affordability is rated on a scale of 0 to 5. The 3.0x median multiple signs that the market delivers a distribution of housing that are subjected to minimal distortions (Reeves, 2014).

Definition and concepts of Housing Intervention

The basic economic concept of supply and demand demonstrate a situation where, more demand will create more supply and in a perfect economic equilibrium, the market will respond to the increasing demand. However, in an imperfect market where there are other forces, issues
on inadequate supply arises. More often than not, there is an imbalance in the supply and demand where demand exceed supply especially for housing for those in the lower income bracket. Reason being the profit oriented nature of private developers where they are more interested to develop high cost or luxury housing for bigger margin or profit. Left to the market, there is bound to be shortage of housing supply for the lower income group especially in desirable location. Many scholars stressed the importance to balance this situation. Barker (2004) emphasised the need to "strike a balance" to achieve among others in the context of housing an adequate and affordable housing for a growing population; and meeting the aspirations of individuals as to the amount of space, the location and nature of housing to be provided.

From Musole (2009) who did a review on property rights, transaction costs and institutional change; market failure exists when it fails to produce economically or socially desirable outcomes. Therefore, market failure is often cited as the principal rationale for state intervention in economic systems and markets. Musole further cited, that public policy intervention in market (or other economic) processes is, therefore, generally adopted for these reasons; elimination of market imperfections and failures to increase operating efficiencies; removing externalities, so that the social costs of outcomes correspond more closely to private costs; and redistribution of society's resources, so that disadvantaged groups can share in society's output. From Tiesdell & Allmendiger (2008), there are various types of policies that could be implemented to intervene with the housing market. These are explained in Table 1

Table 1 : Type of Policies

Policy type	Purpose	Examples
Market 'shaping'	To shape the context within which market actions and transaction occur	Statutory development plans. Transport investment plans. Code for sustainable homes.
Market 'regulation'	To regulate or control market actions and transactions, ensuring some consideration of externalities and the public interest	Development control/management. Building regulations. Restrictive covenants attached to sales of public sector land
Market 'stimulation'	To make the market work better, by having a direct impact on financial appraisals	Land assembly and release. Grants or tax breaks to encourage more desirable activity or taxes to discourage undesirable activity.
Capacity building	To build capacity of state and/or market operators	Encouraging public-private development partnerships. Promoting skills for sustainable communities

Source: Adopted from Tiesdell and Allmendinger (2005)

Looking at Malaysian scenario, Interventions in the housing market is assumed able to provide sufficient affordable houses for a particular group of people. State intervention usually takes varied forms. It may come in the form of taxation or subsidies, direct ownership

and/or participation in investment and provision of goods and services, or it may take the form of administrative/regulatory controls (Musole,2009). Development of public private partnership is also a type of intervention from the government.

Housing Policy as a Tool

Keivani & Werna (2001) indicates that in the World Bank Policy Paper (1993) enabling strategy is recognized as the way forward for developing method of intervention in the housing industry. Government have at their disposal seven major enabling instruments; three that address demand-site constraints, three on supply side constraints, and one that improves the management of the housing sector as a whole. Demand side : developing property rights ; developing mortgage finance; Rationalising subsidies. Supply side : Providing infrastructure for residential development ; Regulating land and housing development ; Organising the building industry. Finally, developing an institutional framework to improve the management of the housing sector as a whole.

Housing policy can be a tool to shape, regulate, stimulate market and for capacity building in the housing marke (Tiesdell & Allmendiger,2005). It is important to ensure that housing industry is managed to ensure equal access of housing to all. Housing policy in Malaysia has been developed quite comprehensively to address issues in housing provision. At the national level, there is a macro policy that covers the general aim for housing provision in Malaysia. In "Housing The Nation : Housing Policies and Institutions I. The National Housing Policy" (2013) by The Ministry of Urban Wellbeing, Housing and Local Government, National Housing Policy (NHP) was launched on 10 February 2011 to outline the direction of and to form the basis for the planning and development of the housing sector at the federal, state and local levels. The National Housing Policy (NHP) goal is to provide adequate, comfortable, quality and affordable housing to enhance the sustainability of the people's quality of life. It encompasses

Current Housing Scenario

Affordability

According to the Department of Statistics Malaysia (2014), the population are categorised into 3 groups indicated as the B40 or bottom 40% with house monthly household income of below RM3,860.00,. M40 or middle 40% with monthly household income of between RM3,860.00 – RM8,319.00 and T20 or top 20%. with monthly household income of RM8,319.00 and above. As Malaysia becomes more urbanized, the demand for affordable housing will increase. There will be more demand for housing within prime urban areas.

Malaysia is currently facing issues on housing affordability especially for those in the middle income group who reside within prime city areas. The house price offered by the private sector (developers) are in the range of unaffordable to severely unaffordable (Khazanah Research Institute, 2015). Trends in Malaysia indicate that both the bottom 40% and middle 40% of income earners are likely to require social housing. (Khazanah Institute,2015). The middle income group that are seriously facing affordability issues refers to the household under the income group of middle 40% or the M40 household group whose income level is between 41% to 80% from the overall income distribution. (RMK 11). Studies suggested that the provision of social housing for the majority of the population will put financial pressures on government spending.

Over the years, the house price provided by the private sectors in Malaysia has increased quite substantially on average by 5.6% annually between the year 2000 and 2012. (Cagamas , 2014). Present property market scenario in Malaysia witnessed a significant

increase in the price of housing. Malaysia registers an average 6.6% jump in home prices in the fourth quarter of 2011. This has put strain particularly for the middle income group, especially those residing within prime city areas. According to the Department of Statistics Housing Income Survey (2014) Malaysian median income stood at RM 4,500 signalling households are unable to afford houses priced higher than RM300, 000 (DOS, 2014). While based on the National Property Information Centre report (2014) only 31.7% of the. housing units built in the year 2014, had a price tag lower than RM 250,000 (NAPIC, 2014b).

Basically, it can be concluded that there is a gap in the affordability for housing in the middle income category (income in the range of RM 4,500 – RM10 000. Difficulty to afford houses more than RM400,000.).From Diwa(2016) currently there exist 40 per cent gap between the demand for affordable housing and its supply in the country. Thus, evidently the income pattern of the middle income household finds it challenging to keep pace with the rising cost of housing unit and thereby the need for affordable housing has become more vital than ever before. Affordability issues has expanded to the middle income group (M40) therefor, there is a need to formulate housing policies to this

Housing Policy Evolution

According to Shuid (2016), the evolution of the housing industry in Malaysia is significant since 1971 he thereof divided the housing provision system in Malaysia into four phases namely Housing the Poor (1971-1985). Market reform (1986-1997), Slums Clearance (1998-2011) and State Affordable Housing (2012-to date). This paper will integrate the housing provision system phases (Shuid,2016) with the planning issues to be addressed according to Malaysia's planning levels (Burton, 2001). In the context of this paper, significant programmes and issues within the housing industry will be highlighted to make conclusion on the way forward for affordable housing policies in Malaysia.

Table 2: Malaysian Housing Policy Evolution

MALAYSIAN HOUSING PROVISON PHASES	MALAYSIAN PLANNING HIERARCHY Issues to be Resolved	APPROACH/PROGRAMMES	ACHIEVEMENT/ISSUES
HOUSING THE POOR (1971-1985)	**1970 – 1990** • The outcome of the May, 13 riot – New Economic Policy • Main aim – to strengthen national unity • Objectives of NEP: 1. Eradication of poverty irrespective of ethnicity 2. Restructuring of society 3. Introduction of Rukun Negara • 1980's – economic recession Objectives of NEP – not achieved - need to review process	Concurrent with the project period of the New Economic Policy (NEP) from 1971 to 1990. NEP initiated to foster nationality unity and union-building The 2 pronged objectives of NEP : 1. eradicating poverty irrespective of race, 2. restructuring Malaysian society to eliminate the identification of race with economic functions. **SCENARIO** : : Emerging urban slums in the 1970's (a huge inflow of rural residents, mainly Malays into the urban area, especially the Kelang Valley area surrounding Kuala Lumpur) – resulting from introduction of NEP and the steady economic growth since independence **PROGRAMMES/EFFORTS :** 1. 1982 : Imposition of 30% quota low-cost housing with a controlled selling price of RM25,000 per unit (to private companies) 2. Opening up of new land and settlement schemes by the Federal Land Development Authority (Felda); 3. Provision of housing finance by Bank Bumiputera;	• Federal government paid more attention to the housing needs of the lower income groups.. • housing industry to play a leading role in stimulating economic growth. • The NEP focused on the development of housing estates in new areas to achieve economic balance between urban and rural areas. • main providers of the medium and high-cost houses were private companies, • state governments and their government-owned companies, the State Economic Development Corporations (SEDCs), with the support of the federal government, provided the low-cost houses. • Promotion of Malaay participation in commerce by Majlis Amanah Rakyat (Mara, Council off Trust for Indigenous People) and in industry by Malaysian Industrial Development Authority (Mida); and (MARA).
MARKET REFORM (1986-1997)	**1991-2000** • NEP policies were maintained • Policy – growth with distribution and	**SCENARIO :** • Rapid economic growth • Rural-urban migration and increasing influx of foreign immigrants	• private companies played a key role in housing provision.for low cost construction

	balanced development towards developing an integrated and just society. • The new dimension of National Development Plan (NDP) : 1. Importance of human development 2. Science and technology as the basis of development 3. Protection of the environment and ecology	**PROGRAMMES/EFFORTS :** • Privatisation policy was introduced to reduce government's spending (includes housing – for low cost) • Since the rule of the thirty percent quota for low-cost houses	• Comments on land value within urban areas • private companies used the cross-subsidy system, which uses revenues collected by the sale of high-cost houses to reduce the cost of low-cost houses. • The federal and state government started to retreat from direct housing provision during this phase.

Table 2: Malaysian Housing Policy Evolution

MALAYSIAN HOUSING PROVISON PHASES	MALAYSIAN PLANNING HIERARCHY Issues to be Resolved	APPROACH/PROGRAMMES	ACHIEVEMENT/ISSUES
SLUMS CLEARANCE (1998-2011)	**2000 – 2010** • Development of one nation • An industrialized country • Social and economic justice • Moral and ethical importance • Social development based on family and kinship	**SCENARIO :** • Unresolved squatters problem • Oversupply of low cost houses • Inefficient housing allocation system • **PROGRAMMES/EFFORTS :** • New ceiling price for low cost housing set between RM30,000 and RM42,000 per unit according to locationin June 1998 • Privatisation policy was introduced to reduce government's spending (includes housing – for low cost)	- • Leading role by federal government (in PPR) • direct housing provision especially for the low-income group
STATE AFFORDABLE HOUSING (2012 – to date)	**2010 to date** Introduction of new economic model NEM , with its policies to be implemented through the newly created : Governmenr	**SCENARIO :** • Bipolar situation with too many houses in low cost and high cost category • Lack of affordbale housing (especially for the middle	• a change in the target group for housing provision. • Started to direct housing provision to the middle-income group. • More participation from

	Transformation Programme (GTP) and the Economic Transformation Programme (Andaya, 2017)	income population) • Increasing house price since 2008 **PROGRAMMES/EFFORTS :** • National Housing Policy (2011) • Federal Affordable housing Schemes : 1. Perumahan Rakyat 1 Malaysia (PR1MA) in 2011 under Perbadanan PR1MA Malaysia 2. Perumahan Penjawat Awam 1Malaysia (PPA1M) for civil servants 3. My First Home Scheme 4. MyHome Scheme 5. Rumah Mesra Rakyat 1 Malaysia • State governments : 1. Rumah Selangorku in Selangor; 2. Rumah Wilayah Perskutuan (RUMAWIP) for the residents in Federal Territories; 3. Rumah Mampu Milik Johor (RMMJ).	private developers (small and big developers) • Joint ventures between the public and private sectors

Source: Author (2018)

During the phase of housing the poor, the main providers of the medium and high-cost houses were private companies, while the low cost houses is provided for by state governments and their government-owned companies, the State Economic Development Corporations (SEDCs), with the support of the federal government. During this phase, emphasis is for the lower income population with the main socio economic aim for poverty eradication.

As for phase of market reform, the federal and state government started to retreat from direct housing provision during this phase. Private sectors played a bigger role, through the imposition of 30% quota low-cost housing with a controlled selling price of RM25,000 per unit since 1982. This phase sees the move towards. In the slum clearance phase, new ceiling price for low cost housing set between RM30,000 and RM42,000 per unit according to locationin June 1998 was introduced. This was a move to encourage more low cost housing to be built in prime urban areas . Privatisation policy was also introduced to reduce government's spending which includes in the housing sector(for low cost housing.)

In the state affordable housing phase, there is a significant move in planning where it emphasise on the regional development with some urban area, like Johor Bahru, Kuantan,

Penang becoming the catalyst for the region's development. Investments pouring in, leading to an increase in jobs opportunities and urban population in urban areas. The growing number of middle income segment create demand for affordable housing. National Housing Policy was introduced in 2012 to address the issue with strategies to provide for sufficient affordable housing for all. Various programmes under the federal government was introduced such as Perumahan Rakyat 1 Malaysia (PR1MA) in 2011 under Perbadanan PR1MA Malaysia,(Federal government-owned company under the purview of the Prime Minister Office) and Perumahan Penjawat Awam 1Malaysia (PPA1M) for civil servants, My First Home scheme, MyHome Scheme, Rumah Idaman Rakyat. State governments also played a bigger role to provision of affordable housing with schemes such as Rumah Selangorku in Selangor; Rumah Wilayah Perskutuan (RUMAWIP) for the residents in Federal Territories; and Rumah Mampu Milik Johor (RMMJ)

Overall, we can observe that there is a change in the target group for affordable housing provision. In the previous phases, the government's main target was those of low-income, and only directly provided low-cost houses in principle. However, both the federal and state governments during the later phase started to offer direct housing provision to the middle-income group. Realising the burden to subsidise for this segment, participation of the private sector is encouraged with various programmes and housing schemes introduced.

Conclusion

Malaysia is currently facing issues on housing affordability especially for those in the middle income group who reside within prime city areas. The house price offered by the private sector (developers) are in the range of unaffordable to severely unaffordable (Khazanah Research Institte, 2015). In the context of this research, the targeted group that will be discussed will be those who are categorized as the middle income group. This refers to the household under the income group of middle 40%. They are referred to as M40 household group whose income level is between 41% to 80% from the overall income distribution. (RMK 11). The magnitude of this problem has prompt the government to put emphasis on the efforts to address this issue and making sure that

Throughout the years, housing policy in Malaysia has always been consistent in addressing the issue in providing housing for the lower income people. The demand for housing in Malaysia has increased in recent years as a result of healthy economic growth. This has been supported by decreasing mortality rates, the number of persons per household and the growth of nuclear families as against extended families brought about by economic development and decreasing unemployment. Current housing problem in Malaysia revolves more around the issue of inadequate provision of affordable housing not only for low income people but most importantly, the middle income households. In response to that, detail, policy on housing is moving towards facilitating access for the middle income group (M40) to owning a house.

Malaysian housing industry has experienced participation by both public and private sectors where medium and high cost housing has always been under the private sector. However, with the current scenario of housing affordability and the market forces, there should be intervention from the government. Studies have claimed that in respect of the practice of public-private partnership in housing sector, it is said to be a success story, particularly as it relates to housing the vulnerable groups of poor and low income group. Housing provision for the low income group Malaysia has made a huge stride (UN- Habitat, 2005). Implementation of public private partnership for housing is significant and does not imply a reduction in government responsibility in the provision of affordable housing to the

low-income group. It encourages an integrated approach to the use of financial institutions, human and physical resources in public, private and so called the "third" sectors - the community so that full advantage can be taken of the strengths and capabilities of each of them (Ong & Lenard, 2002).

It can be concluded that implementation of public private partnership is seen as the way forward in formulating policies to address issues in supply of affordable housing in meeting the demand of the growing population. Rationale being that emphasis is now on the provision for housing within the middle income segments. Moreover, the policy is seen as moving towards the state's responsibilities. Partnership is also a win win situation for both parties. This is verified by a developer (P1) and official from a local authority (P2) both are involved in affordable schemes :

P1 " partnership is favourable because it balances the need (for housing) of the middle income segment , who are mostly Malays" .

P2 "partnership (of federal affordable housing programme) will complement the states on enhancing the supply of affordable housing".

Nevertheless, there are various issues in the implementation of public private partnership thus this provide a signal to the regulatory body concerning the need to immediately overcome the issue. This is mainly because implementation of public private partnership is still new and progressing in Malaysia, so the need for clear guidelines and procedures is considered important by key players in the industry.

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MEASURING THE SKILLS OF LEADERSHIP AND INSTRUCTIONAL COACHES FOR SCHOOLS TRANSFORMATION PROGRAMME

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Abstract :*The study aims to determine the levels of coaching skills among the school transformation coaches. They are specially selected mainly to assist school leaders and teachers in transforming the schools and students towards excellence. The objectives of this study are first, to assess the levels of listening and questioning skills, and second, to identify the extent of the related skills being used. There are five listening sub-skills and five questioning sub-skills identified for the purpose of this study. It comprises 43 participants selected from 110 coaches who have been involved since the programme started in 2016. The study uses quantitative and qualitative approaches. The participants are required to carry out a coaching simulation session. Each of them is given 20 minutes to conduct the session and 10 minutes for feedback session. They are assessed by two certified coaches for each session. A checklist form and grading form are used as instruments. There are four levels of competency to identify the participants' listening and questioning skills known as Ineffective (1), Developing (2), Skilled (3) and Excellent (4). The results of the study find that most of the participants are at the 'Skilled' level for both listening and questioning skills. The former was at the Mean level of 3.33 and the later was at 3.58. Further analyses for listening component skill find that the sub-skill of 'making conclusion' is used by most of the participants and the sub-skill of 'using decision making tools' is the least used. For questioning skill component, the sub-skill of 'using appropriate open and closed questions' is the most used and the sub-skill of 'creating awareness for decision making improvement' is the least used. It can be concluded that the participants' have good skills in listening and questioning for coaching. It is suggested that they need to further develop their skills in helping their coachees to make decision using appropriate tools and for improvement.*

Keywords: *Coaching, Education, Leadership, Instructional School, Assessment*

Introduction

Coaching is based on the principle that each individual needs someone to guide them on deciding what is best for the betterment of their personal and professional development. In an organizational context, coaching is part of training and development process of an employee. It is an effective method of training deliverance for professional development that many organizations have acknowledged its importance.

Leadership and instructional coaching is carried out specifically to help schools improve the quality of their leadership as well as teaching and learning process. This is based on the premise that students' excellence is depended on the quality of the school's management team and teachers.

Coaching process can only be effective if it is carried out accordingly. The theory and concept of coaching need to be applied to ensure that a coaching process is really practised. It is understood that there are theories, concepts and models of coaching being applied by practitioners from various backgrounds but in principle, they are similar. Therefore, it is important to know how far the actual coaching practices are applied especially when it involves newly practising coaches as in this study.

Background of the study

In 2013, the Ministry of Education (MOE) has embarked on a master plan to transform all schools under its administration in the country that takes into considerations of the needs of the 21st Century reality. This master plan known as Education Blueprint 2013-2025 focuses on the education system and students' needs that involves the leadership, teachers and students aspects. It is hoped that by 2025, the education system in the country is able to produce excellent schools with high performance leaders, high quality teachers and excellent students academically and socially.

To ensure the success of the master plan, MOE introduces an initiative called as School Transformation Programme in 2016 which is officially known as TS25. It is aimed at enhancing students' excellence and school quality by implementing best practices in instructional leadership as well as teaching and learning. Special coaches are appointed among educators who have vast experience in teaching and leading.

These coaches are assigned to selected schools to help the school heads and teachers on ways to implement good practices in all aspects of instructional leadership and management. This has been carried out for two years since it started in 2016. Before that, these coaches are given a series of training on how to carry out their responsibilities including knowledge and practice of coaching.

Rationale of the study

The study is carried out for the following reasons. There is no empirical evidence yet on how far the actual coaching process is being applied by these coaches. It is the researcher's institution responsibility to give these coaches knowledge and practice of coaching. This responsibility also includes providing help and support to enhance their
coaching skills. This study can be considered as a starting point on how to further develop their coaching skills.

In addition, it is considered a suitable step to assess the coaches' skills after practising them for two years with a series of coaching session with the schools' leaders and teachers. This can be considered as a basis of studying the impact of coaching practices on the selected schools that to be carried out later.

The study is also carried because these coaches have little or no experience in coaching prior to their appointment as coaches for this programme. They are selected mainly for their knowledge and experiences as teachers and administrators. Assessing their coaching skills provides a better understanding on the effectiveness of the coaching training given to them.

Objectives of the study

The study is carried based on the following objectives:

1. To identify the levels of listening and questioning skills in coaching.
2. To identify the extent in which these two main skills are being used.

Significance of the study

The study is significant because its findings provide a clear understanding on the coaches' ability in handling their coaching sessions. This helps to determine the strenghts and weaknesses of the coaches' skills and find ways on how to develop and enhance the skills. This is important for the programme evaluation purpose since its success is heavily depended on the effectiveness of the coaches when implementing their consultations at schools. The instruments used for this study can be considered as another significant contribution for this study. It is because the instruments are developed based on the needs and requirements of school leaders and teachers of the country.

Literature review

Definition and concepts of leadership and instructional coaching

Coaching is a task or activity in training and helping a person to do certain things (Cambridge Dictionary, 2018). It is mainly about what John Whitmore describes it as 'unlocking a person's potential to maximize their own performance' by helping them learning instead of teaching them (Team FME, 2013). Coaching has no definite definition (van Nieuwerburgh, 2017) to be agreed upon (Thomson, 2014). Its definitions could also be confusing according to Wilson (2007). Leadership coach and instructional coach are two of the most used terms in education context. These refer to highly skilled persons whose main responsibility is to assist and guide the school management teams for improvement and attaining student achievement (Laba, 2011). In other words, leadership and instructional coaches have the competency and capacity to deal directly with the school heads, senior leaders, middle leaders and teachers to help them develop their capability for school improvement and student achievement.

Organizations implement coaching initiatives for several reasons. According to Ely, Boyce, Nelson, Zaccaro, Hernez-Broome and Whyman (2010), leadership coaching is needed to improve leadership skills, develop new leadership skills and develop leadership capabilities. Instructional coaching is mainly aimed at improving classroom instructions by focusing on 'learning and development' (van Nieuwerburgh, 2017) to change and improve their teaching practices (Purdy, 2017).

GROW is one of the mostly used models of coaching because of its applicability and effectiveness according to Thomson (2014). It is a process that helps coaches to carry out their sessions within the coaching framework principles. A coaching session usually starts with setting up the goal (G), exploring reality (R), choosing options (O) and identifying the way forward or will (W). GROW is a coaching cycle that a coach needs to know and understand as stressed by Jim Knight (Hanover Research, 2015). In applying this model or any other coaching related model, there are skills that coaches need to have. According to HR Division (2015), communication skills are pertinent to ensure effective implementation of coaching sessions. It is important for coaches to have good listening and questioning skills for a meaningful communication. They have to practise active listening skills to enable them to paraphrase, reflect, summarise and give feedback on what have been said by their clients. Having good questioning skills requires coaches to know when to ask closed and open questions, what questions to ask and what questions not to ask. The main purposes for questioning are to clarify, probe, enquire and stay focused.

An assessment of coaching effectiveness is important especially when it involves an organizational level initiative with a special allocation of budget. The need for the coaching effectiveness assessment is widely discussed in Carter (2006), Wilson (2007), Ely et al. (2010), McGurk (2010), O'Dell (2011) and Grover and Furnham (2016). There are various

studies focusing on this such as McGurk (2010), O'Dell (2011), Krasnoff (2015) and Lawley and Linder-Pelz (2016).

Methodology

The study uses both qualitative and quantitative approaches. It involves 43 participants selected among 110 coaches of the TS25 initiative. Each of them is required to carry out a 20 minute coaching simulation session and followed by a 10 minute interview session. Each session is assessed by two certified coaching experts. There are 14 assessors appointed for this study. These assessors are given a special training on how to conduct the simulation sessions. The participants' listening and questioning skills are assessed during the simulation session and interview session. Two participants are called in at one time to carry out the simulation. Both of them take turn to play roles as a Coach and a Coachee. There are five stimulus questions provided in which the Coachee has to choose one. Only the Coachee knows the scenario and the Coach needs to handle the session based on the scenario. Observations are made based on related sub-skills. There are five listening sub-skills and five questioning sub-skills being assessed:

Table 1: Competencies for listening and questioning skills

Listening Skills	Questioning Skills
1. Making notes based on Coachee's information	1. Asking relevant open and closed questions
2. Framing what has been discussed for clear understanding	2. Probing for more information
3. Rephrasing and simplyfying	3. Igniting Coachee's mind for making choices
4. Summarising	4. Keeping focused on agreed agenda
5. Using decision making tools	5. Making Coachee aware of the need to make decision for improvement

The assessors observe the participants during the simulation session using an observation form as an instrument to identify the frequency of use for each of the sub-skills. The assessors then interview the participants to triangulate the observation data. After that, the assessors discuss with each other to make a consensus on which competency level to give. There are four levels of competency identified for this study namely, "Ineffective" (1), "Developing" (2), "Skilled" (3) and "Excellent" (4).

The data are then analysed quantitatively to obtain the mean scores for both listening and questioning skills of all the participants. An analysis is also made to obtain the mean scores of each of the sub-skills.

Findings

The study manages to carry out 43 coaching simulation sessions that involve 43 participants and 14 assessors. The participants comprise 26 males and 17 females. All participants are experienced lecturers from Teacher Education Institutes.

An analysis is carried out based on the overall scores of all the participants according to listening skills and questioning skills. It is found that the mean score for listening skills is 3.33 and the mean score for questioning skills is 3.58. It can be said that the participants have good skills in listening and questioning when carrying out coaching sessions. Their questioning skills found to be slightly higher than listening skills.

Further analysis is also done to determine the extent of using all the ten sub-skills for both listening and questioning. This is based on the frequency of use of the sub-skills by each participant. One point is given for each sub-skill and zero point if any of the sub-skills is not used at all. The mean scores of all the sub-skills are then calculated. The following table shows the findings of the analysis.

Table 2: Mean scores for listening and questioning sub-skills

Listening Skills	Mean	Questioning Skills	Mean
1. Making notes based on Coachee's information	0.69	1. Asking relevant open and closed questions	1.00
2. Framing what has been discussed for clear understanding	0.62	2. Probing for more information	0.74
3. Rephrasing and simplyfying	0.90	3. Igniting Coachee's mind for making choices	0.90
4. Summarising	0.85	4. Keeping focused on agreed agenda	0.79
5. Using decision making tools	0.41	5. Making Coachee aware of the need to make decision for improvement	0.69

The study discovered that 'rephrasing and simplyfying' sub-skill is the most used (mean=0.90) and 'using decision making tools' is the least used (mean=0.41) by the participants for listening skills component. For questioning skills component, the most used sub-skill is 'asking relevant open and closed questions' (mean=1.00) and the least used is 'making coachee aware of the need to make decision for improvement' (mean=0.69).

Discussion

The findings indicate that the participants have the required skills in giving attention to what their Coachees are saying as well as the skills to ask relevant questions to make sure that their Coachees give full attention and stay focused in the discussion. It can be said that the participants have developed their coaching competency especially in listening and questioning after having involved in the initiative for two years.

However, the findings also indicate that there are aspects that the participants need to improve. It is suggested that more focus should be given on the knowledge of decision making tools and how to use them effectively in coaching. The participants should also focus on developing their ability to listen more attentively to enable them to frame the scope of discussion. This is important because it would help Coachees to get clearer understanding on the situations they are discussing. For questioning competency, it is suggested that more focus to be given on developing participants' skills in assisting Coachees to make appropriate decisions as the next step for improvement. This is because many of the participants lack this ability and making improvements is an evidence that indicates the effectiveness of the coaching practice.

Closure

The study is only focusing on Coaches' coaching competency in terms of their listening and questioning skills based on five sub-skills for each of the two main skills. The findings may not represent the entire TS25 Coaches but could serve as a starting point to implement a

larger scale study with a large number of participants and more vigorously in-depth analysis. The findings could also be used in an effort to enhance the Coaches' competency.

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ANALYSING THE MEDIATION EFFECT OF CLIENTS' SATISFACTION BETWEEN AUDIT QUALITY AND AUDITOR RETENTION AMONGST SMALL AND MEDIUM ENTERPRISES (SMES).

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Abstract: *Audit quality has been widely researched and the literatures have proven the quality of auditor-sourced services is of paramount importance to client management in deciding whether to continue with auditor services. The audit firm should be concerned in delivering high quality services through competencies and independence, as these two factors are used as proxies for audit quality based on the social exchange theory. Therefore, the purpose of this study is to explore the relationship between audit quality and auditor retention amongst Small and Medium Enterprises (SMEs) in Sabah. Additionally, the study also examined whether satisfaction has a role as mediator between the audit quality and audit retention. The study applied a quantitative analysis of which at least 100 questionnaires were distributed to the SMEs and only 70 were useable and finalized. We deployed SPSS version 21 to conduct descriptive and regression analysis. Our findings indicated that clients' decision to retain auditor services depended upon auditor's competencies but less depended on auditors' independence. Additionally, when the study put forward satisfaction to mediate the relationship between competence, independence and auditor retention, it is revealed that satisfaction has full mediation effect on clients' satisfaction towards auditor retention but partially mediated independence and auditor retention. This study is significance as it is one of the earlier studies in Malaysia, particularly in Sabah, that has provided insight on the clients' (SMEs) intention for auditor retention from the perspective of customer satisfaction towards audit service quality. Therefore, the findings could be relied upon by audit firms to enhance its' audit services based on competencies which leads towards clients' satisfactions and audit services retention.*

Keywords: *Audit Quality, Clients' Satisfaction, Audit Retention, SMEs, Behavioral Theory.*

Introduction

External auditors play a vital role in the protection of financial users by ensuring the effectiveness of organizational management. They also face challenges in maintaining and safeguarding their professional reputations. Therefore, auditors should be concerned in providing high quality services to gain retention from their existing clients an extended period and at the same time, continue to attract new clients. By delivering high quality services to their clients, it will maximize client satisfaction and leads to customer retention

(Pandit, 1999; Ismail, Haron, Ibrahim and Isa, 2006; Morton and Scott, 2007; Duff, 2009). The social exchange theory is suitable in explaining the relationship between auditor and their client (Herda and Lavelle, 2013), which focuses on the client's perception towards auditor in delivering high quality services and confidence with the service quality in the future based on satisfactory and consistency of past performance (Barnes, 2007; Tribault and Kelly, 1959).

Previous studies indicated three elements that are important in maintaining the services performance of a company which are service quality, satisfaction and customer retention (Mohamad Sabri, 2014; Inamullah, 2012; Chris Lin and Wu, 2011; Ismail *et al*., 2006). Audit quality has an effect on the retention and extension of the existing auditor's service (Morton and Scott, 2007). Clients will continue to employ audit services for a longer time from their existing external auditor when they are satisfied with the overall quality of services (Ismail *et al*., 2006, Mohamad Sabri, 2014; Mohamad Sabri and Ramely, 2015), due to satisfaction is one of the crucial factors for clients to decide whether to stay or switch their existing auditor (Mohamad Sabri, 2014; Fontaine, Letaifa and Herda, 2013).

Therefore, retention is considered as a main concern for practitioners due to its significant impact towards the improvement in firm performance, especially in term of sales and profitability (Odunlami, 2015). Audit firms also faced similar issues related to retention, which can negatively influence audit performance, audit quality and auditor and professional reputations. As a result, audit firms tend to focus more on improving the overall quality of services, as well as maintaining the technical effectiveness (Duff, 2009) in order to gain retention from their clients. However, audit firms experienced difficulty in ensuring their client satisfaction and repurchase intentions, due to auditor might failure to provide better audit quality services or commit a lot of error in delivering services (Mohamad Sabri, 2014; Ismail *et al*., 2006).

The problems of auditor retention can be viewed from the perspective of SMEs' intention towards their existing auditor. Due to lack of managerial capabilities, skills and expertise in SMEs, so they need auditor to provide financial assistance. This is to guarantee SMEs complied with legal requirement and achieve competitive advantages. Additionally, SMEs are considered as one of the main GDP contributions and backbone of the economic growth in Sabah. Sabah's SMEs is essential as the state with the highest contribution to job opportunities. Moreover, SMEs were chosen as the respondents, since SMEs is categorized as companies with high percentage in retaining their existing auditor for longer tenure and utilise non-audit services in the same audit firm (Mohamad Sabri and Ramely, 2015; Mohamad Sabri, 2014; Haron *et al.*, 2012).

Although related studies have been conducted in Malaysia (Mohamad Sabri, 2010; Ismail *et al*., 2006), but replication of study in different context such as SMEs in Sabah should be undertaken. Thus, more research should be carried out to identify the relevant information based on client's decisions and SMEs are suitable as it enable to narrow down diversity of studies and facilitated data collection. Due to lack of the empirical study in these areas particularly in the Malaysian SME's, especially in Sabah, the topic of this paper will present a comparable issue between Sabah and other Malaysian states, and overall in Malaysia. Therefore, the purpose of this study is to explore the relationship between audit quality and auditor retention amongst Small and Medium Enterprises (SMEs) in Sabah. Additionally, the study also examines whether satisfaction has a role as mediator between the audit quality and audit retention.

Literature review

Auditor retention

Retention is defined as customer repurchases the same product or used services from the same firm for a longer period (Ang and Buttle, 2006; Sirdeshmuh, Singh and Sabol, 2002; Bowen and Chen, 2001). The definition of auditor retention was adopted from the definition of retention and is defined as intention to retain audit firm (Pandit, 1999: 176). There have been multiple studies that scrutinised client perception of audit quality, satisfaction and auditor retention (Ismail et al., 2006; Butcher et al., 2013; Mohamad Sabri, 2014). Satisfaction is an important player in enhancing retention. It can be proven from marketing literature; customer satisfaction was strongly significant and positively associated with customer retention (Odunlami, 2015; Inamullah, 2012; Lin and Wu, 2011). This result is consistent with study from professional services firms, found a highly significant relationship between satisfaction and auditor retention (Mohd Sabri, 2014; Trasorras, Weinstein and Abratt, 2009; Ismail *et al*., 2006).

Moreover, previous researchers also studied on the relationship between quality of services and auditor retention. The result indicated that there was a positive and significant relationship between audit quality and auditor retention (Butcher, Harrison and Ross, 2013; Morton and Scott, 2007; Pandit, 1999, DeAngelo, 1981). In conclusion, preceding studies have identified that service quality and customer satisfaction has substantial relationship with auditor retention (Mohamad Sabri, 2014; Ismail *et al*., 2006). Therefore, improvement in service quality and higher level of customer satisfaction leads to auditor retention and the following hypotheses are presented:

H_1: There is a significant and positive relationship between satisfaction with auditor retention.

H_2: There is a significant and positive relationship between audit quality with auditor retention.

- H_{2a}: There is significant and positive relationship between competence with auditor retention.
- H_{2b}: There is significant and positive relationship between independence with auditor retention.

Audit Quality

Audit quality has become the centre of attention, for being an interesting subject, and has been defined from various perspectives. The most discussed and commonly used definitions by many researchers in describing audit quality, comprises of competence (the technical quality on probability of auditor to uncover the breach or misstatement) and independence (professionalism behaviour of the auditor to report the breach or misstatement found) (DeAngelo, 1981; Moizer, 1997; Herrbach, 2011; Sulaiman, 2011). Based on empirical research, it is noted that audit quality was evaluated based two type of measure; direct and indirect measure (Arezoo, 2011). The example of direct measures are financial reporting compliance, quality control review, bankruptcy, SEC performance, while indirect measure is related to behavioural perspective such as service quality and technical quality (i.e. reputation, independence, competence and experience).

There are existing studies on satisfaction which proven that service quality is essential in providing customer satisfaction. Providing high audit quality can relatively affect client satisfaction, and there is significant relationship between audit quality and client satisfaction (Ismail, Haron, Ibrahim and Isa, 2006; Morton and Scott, 2007; Butcher et al., 2013). Competence is a proxy in measuring audit quality and is defined as the knowledge

(education, expertise, skills and experience), as well as having ethical behaviour in conducting audit (Asmara, 2016; Usman, 2016; Arens, Elder and Beasley, 2014). The most important audit quality dimension for auditors is capability, which is part of competence factor (Dunakhir, 2016). Therefore, competence was significant and positively associated with customer satisfaction (Moghavvemi, Lee and Lee, 2018; Iskandar, Rahmat and Ismail, 2010).

Another attributes of audit quality measurement is independence. Independence is defined as the basis of reporting a discovered breach and divided into two categories namely independent in appearance and independence in fact (DeAngelo, 1981; Freanley, Beattie and Brandt, 2005). Previous studies demonstrated empirical evidence that independence influences audit quality (Suyuno, 2012; Alim, 2007). Quick and Schmidt (2018) brought attention to only one study from Dopuch, King and Schwartz (2017) was investigated the effect of auditor retention on auditor independence and observed that audit firm rotation either alone or jointly with auditor retention, increase auditor independence. However, it contradicts with their result, which perceived auditor independence does not have a significant effect on rotation and retention. However, study from Iskandar *et al*. (2010) found that client satisfaction is significantly and positively related to audit firm independence. Therefore, the following hypotheses are presented:

H_3: There is a significant and positive relationship between audit quality with satisfaction.

- H_{3a}: There is significant and positive relationship between competence with satisfaction.
- H_{3b}: There is significant and positive relationship between independence with satisfaction.

Satisfaction

Satisfaction is described as an immediate reaction of emotion of a person on the specific time or point of determination (Giese and Cote, 2002). Satisfaction occurs when a company has the ability to predict and anticipate based on what customer's desire from their services in order to fulfil client's want, need or goal (Hansemark, 2004; Kotler, 2000; Maclnnis, 2001). Previous studies have found that a mediator affects satisfaction to auditor retention and audit quality (Parasuraman, Berry and Zeithaml, 1990; Ismail et al. 2006; Mohamad Sabri, 2010). Thus, the following hypothesis is presented:

H_4**:** The interrelationship between audit quality and auditor retention is affected by the mediating variable of satisfaction.

Methodology of the paper

A cross-sectional survey study based on the deductive research approach was conducted using a pre-tested questionnaire in the East of Malaysia, namely Sabah. The aim of this study was to assess the relationships between audit quality, satisfaction and auditor retention among SMEs companies in Sabah using regression analysis. The sample of the study were drawn from a population of SMEs companies with annual sales turnover below RM20 million. The data were collected through self-administrative, email and online questionnaire. The questionnaire consisted of four sections, which comprised of (i) demographic of respondents, (ii) client experienced with the audit service from their existing audit firm, (iii) respondent feedback whether they are satisfied or not with the current services offered by firms and could it lead to auditor retention. Lastly in section four, preferred intention to retain or switch

their existing auditor was chosen as the dependent variable to reflect the dichotomous nature of the decision.

Table 1: Questionnaire Design and Measurement

Variable	Items	Source	Measurement
Competence	6	Butcher et al. (2013); Morton and Scott (2007) and Duff (2002)	Five-point Likert Scale
Independence	5	Morton and Scott (2007)	Five-point Likert Scale
Satisfaction	4	Eggert and Ulaga (2002); Taylor and Baker (1994); Taylor and Baker (1994) and Bitner (1990)	Seven-point Likert Scale
Auditor Retention	5	Butcher et al. (2013) and Eggert and Ulaga (2002)	Seven-point Likert Scale

Table 1 showed the questionnaire design and measurement used in this study. Both descriptive and inferential statistical analyses were carried out using SPSS Statistic 21. Descriptive statistical analysis was used to summarise the results of respondents while inferential statistics was utilised to test the relationship. This research ensured that the particulars of respondents were anonymous so that the data collected would not be traced back to them.

Finding and Discussion

Description of sample

A total of 70 respondents participated in this study and the information about demographic profile of companies and respondents are presented below.

Table 2: Demographic Profile of Companies and Respondents

Demographic Variables	Frequency	Percentage
Respondent Designation		
Director and Manager	**40**	**57.1**
Account and Finance Manager	16	22.9
Account Assistance and Clerk	5	7.1
Internal Auditor	9	12.9
Year of Company Operation		
0-5 years	14	20.0
6-10 years	**21**	**30.0**
11-15 years	17	24.3
16-20 years	5	7.1
More than 21 years	13	18.6
Year of using Existing Auditor		
0-5 years	**25**	**35.7**
6-10 years	24	34.3
11-15 years	11	15.7
16-20 years	5	7.1
More than 21 years	5	7.1

Table 2 shows that most of the respondents are directors and managers of company which is 40 respondents, followed by account and finance manager at 16 respondents, internal auditors is 9 respondents and only 5 respondents are account assistants and clerks. Next, the table shows the profile of company, which is the period of company operation and year of company using services from their existing auditor. Most of respondents came from

companies that already have been operating between 6-10 years which is 21 respondents. While, the highest respondents that represents company that using services for existing auditor ranging between 0-5 years which is 25 respondents.

Assessment of variables

In testing the validity of questionnaire, this study used exploratory factor analysis to measure whether the concept or questionnaire for each dimensions emerge or not. The principle component factors (PCA) was employed to analyse all the variables with Promax rotation on data received from 70 respondents. In addition, The Kaiser-Meyer-Olkin (KMO) measured the sampling adequacy, which determines if the responses given with the sample are adequate or not and it should be close than 0.5 for a satisfactory factor analysis to proceed. The result of KMO as suggested that sample was factorable (KMO = 0.589).

Reliability was used to test consistency and stability, and Cronbach's alpha (α) represented how well the items are set positively to each other (Sezkaran, Ratnam and Augustine 2013). A cut-off point of 0.60 in the alpha's value indicates an acceptable degree of reliability of the construct (Hair, Anderson, Tatham and Black, 1998). The result showed that the Cronbach's alpha (α) value ranging from 0.6 to 0.955 has fulfilled the minimum requirement of level reliability as suggested by Hair et al. (1998).

Regression Analysis and Hypotheses result

Table 3: Regression result of satisfaction and auditor retention

Independence Variable	coefficient	t-value	sig	Remark
Satisfaction	1.078	8.756	0.000**	Supported
R^2	0.530			
Adjusted R^2	0.523			
F-statistic	76.661			
Sig. F	0.000			

Notes: **significant at 0.05 level, ***significant at 0.01, *significant level 0.10.

Table 3 exhibits the regression result for satisfaction and auditor retention. The result showed that the t-statistic for satisfaction (t = 8.756, p = 0.000) are positive and significant, while the value of Adjusted R square of 0.523 or 52.3% was significant at 0.000 levels. This result indicated that satisfaction had a greater impact on auditor retention and consistent with previous studies from Odunlami (2015), Innamullah (2012) and Lin and Wu (2011) found that customer satisfaction and customer retention have strong significant and positive relationship. Therefore, Hypothesis H_1 is accepted and concluded that satisfaction affects auditor retention.

Table 4: Regression result of competence, independence and auditor retention

Independence Variable	coefficient	t-value	sig	Remark
Competence	0.356	2.076	0.042**	Supported
Independence	0.143	0.721	0.473*	Not Supported
R^2	0.137			
Adjusted R^2	0.111			
F-statistic	5.308			
Sig. F	0.007			

Notes: **significant at 0.05 level, ***significant at 0.01, *significant level 0.10.

The table 4 displays that the regression results for competence, independence and auditor retention. The result showed that the t-statistic for competence (t = 2.076, p = 0.042) are positive and significant. The hypothesis H_{2a} is accepted have similar result from Butcher (2013), in which competence has a greater impact on perceptions of audit service quality for retainers. While, the independence result (t = 0.721, p =0.473) reported not significance, hence hypothesis H_{2b} is not accepted. According to result from demographic's respondents, it was indicated that the company might not view independence as an important element for audit quality, since most of them are using the services from their existing auditor for more than five years. Based on Sarbanes-Oley Act 2002 (SOX) required rotation for auditor at least one every five years and Malaysia does not have mandatory audit firm rotation requirement (Malaysian Institute of Accountant, 2011, pp.82-83). Therefore, H_2 is accepted.

Table 5: Regression result of competence, independence and satisfaction

Independence Variable	coefficient	t-value	sig	Remark
Competence	0.436	4.068	0.000***	Supported
Independence	-0.047	-0.383	0.703*	Not Supported
R^2	0.260			
Adjusted R^2	0.238			
F-statistic	11.793			
Sig. F	0.000			

Notes: **significant at 0.05 level, ***significant at 0.01, *significant level 0.10.

Based on the above table, the result indicated that the relationship between competence and satisfaction were positively and significantly associated (t = 4.068, p = 0.000). A statistical significant (F-value = 11.79; p= 0.000) was determined. The hypothesis H_{3a} is accepted, mirroring similar result from Iskandar, Rahmat and Ismail (2010), whereby competency is a vital determinant of audit quality and has significant effect on client satisfaction. While relationship between independence and satisfaction was found not to be significant and negatively relationship (t = -0.383, p = 0.703). The value of Adjusted R square of 0.238 or 23.8% was significant at 0.001 levels. Overall, this study concluded that audit quality affects satisfaction and H_3 is supported.

Hypothesis 4 was tested using multiple regression analysis to obtain the result of IV (competence and independence) on the DV (auditor retention) that was tested on a continue scale. Consequently, this study utilized satisfaction as mediator to test whether this variable gives significant effect of audit quality to auditor retention. According to previous studies by Baron and Kenny (1986) and Ramayah (2005), the results in the present study can be categorized to be partial or full mediate depending on few circumstances:

1. Full mediation – when at the end of results is no longer significant
2. Partial mediation – when at the end of result shows still significant but the value of (β) or significant decreased.

Table 6: Hierarchical regression result of service quality, satisfaction and auditor retention

Independent variable	Dependent variable (auditor retention)				Result
	Without mediating variable		**With mediating variable**		
	Coefficient B	t	Coefficient β	t	
Competence	0.356	2.076*	-0.122	-0.870*	Full Mediation
Independence	0.143	0.721*	0.195	1.340*	Partial Mediation
Satisfaction			1.097	7.651***	
R^2	0.137		0.543		
Adjusted R^2	0.111		0.522		
F-statistic	5.308		26.088		
Prob. F-statistic	0.007		0.000		

Notes: **significant at 0.05 level, ***significant at 0.01, *significant level 0.10.

The table 6 presents the hierarchical regression result of service quality, satisfaction and auditor retention that used to understand more on the mediator effect. In this study, satisfaction can be seen as fully mediates between competence and auditor retention, while satisfaction is partial mediates between independence and auditor retention and it is consistent with existing prior research from Mohamad Sabri (2014) and Ismail et al., (2006). Hence, hypothesis H4 is supported.

Conclusion, limitations and future research

The purpose of this study was to explore the relationship between audit quality and auditor retention amongst Small and Medium Enterprises (SMEs) in Sabah. Additionally, the study also examined whether satisfaction plays a role as a mediator between audit quality and audit retention. The findings in this study indicated that competence has a significant effect on satisfaction and auditor retention. Independence was found to be not significant. It was also discovered that satisfaction is a key element in enhancing auditor retention. Thus, satisfied audit client (SMEs) is important in developing auditor retention. Satisfaction was also observed to mediate the relationship of competence and auditor retention.

A limitation of our study is that only two independent variables were chosen for this study. There are other determinants in audit quality that can lead to satisfaction and auditor retention. Another limitation is that, like prior studies, this study is cross-sectional and relies on self-collected data gathered by closed ended survey questionnaire and is, therefore, subjected to the normal limitations. Future research could use alternative theoretical models and other variable to measures of audit quality. Besides that, open ended questionnaires are recommended to be included in the future researchers' survey or using different methods, such as face-to-face interview with respondents.

The lack of adequate research in this particular area warrants further examination, as future studies will be fruitful in understanding the association between audit quality, satisfaction and auditor retention. This study's results have implications for audit firms in practice, since it has provided direct evidence of clients' (SMEs) decisions on audit firm is related to specific attributes of audit service quality, especially audit competence. This result can be used for audit firm as a guide in designing an effective retention strategy in retaining their clients and attract new potential clients.

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THE EFFECTS OF CAPITAL ACCOUNT LIBERALIZATION AND MACROECONOMIC FACTORS ON FIRM-LEVEL STOCK RETURNS VOLATILTY IN MALAYSIA

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Abstract: *There are a number of research that have analysed the impact of financial liberalisation and macroeconomic factors on stock returns volatility. However, the results have been somewhat mixed. In the case of Malaysia, the current research estimates volatility using an EGARCH model where risk factors of stock returns are defined based on CAPM. Using dynamic panel data analysis from the years 1995 to 2013, our results suggest that interest rate has a positive relationship with stock returns volatility. In addition, economic development and exchange rate are found to have negative relationships with volatility. On the other hand, Consumer Price Index and money supply are found to be not statistically significant in influencing volatility. Further, the effect of capital account liberalisation is mixed, and dependent on the liberalisation indices used to measure liberalisation.*

Keywords*: Stock returns volatility, Capital account liberalisation, Macroeconomic factors*

Introduction

Considering the rapid relaxation of financial restrictions taken by the government, and the constant movement of macroeconomic fundamentals in Malaysia, it would seem imperative to understand the influence of such changes on the stock market volatility. Presently, there are scarce empirical studies that analyse the relationships between liberalisation, macroeconomic factors and stock returns volatility in Malaysia. Relying on the findings of previous studies conducted abroad may be insufficient, as findings of previous research thus far provide mixed results. The mixed findings may have negative implications if policymakers and firms in the private sectors use them to design approaches to manage risks of stock market volatility.

The current paper seeks to analyse the impacts of financial liberalisation and macroeconomic factors on stock market volatility in Malaysia. Movement in the macroeconomic factors in Malaysia may have different impact on stock returns volatility in comparison to other markets[3].

This paper is organised as follows: section 2 provides a review of literature related to the topic. Section 3 presents the research methods used in analyses. Section 4 presents analysis on the

[3] This argument corresponds with Arteta, Eichengreen, and Wyplosz (2001) who identified that the variability of macroeconomic stability between markets causes the effect of financial liberalization across countries to be different.

relationship between capital account liberalisation, macroeconomic factors and stock returns volatility. Section 5 summarises the main results.

Literature Review

In their study, Bae et al. (2004) used Generalised Least Square (GLS) estimation to assess the impact of investibility on cross-sectional variations of stock returns volatility in emerging countries. Bae et al. (2004) found that stock returns volatility is positively related to the degree of investibility of individual stocks. Umutlu et al. (2010) investigated the impact of financial liberalisation on aggregated total volatility of stock returns in emerging markets, and found that financial liberalisation consistently reduce aggregate total volatility for different periods of time. They explain the negative effects due to the broadening of investor-base, and that foreign investors who are attracted to invest in local market bring improvement in the market-wide accuracy of public information that eventually lead to reductions in volatility. Meanwhile, Samsudin (2016) looked at how greater openness and financial deepening influence economic volatility in the case of ASEAN-5 countries, namely, Indonesia, Malaysia, Philippines, Singapore and Thailand using data from 1980 to 2014. In contradiction to the findings of Bae et al. (2004) and Umutlu et al. (2010), Samsudin (2016) found no evidence to suggest that greater openness and financial development lead to an increase in volatility, either in the long or short-run.

Zulkarnain and Sofian (2012) analysed the impact of macroeconomic movement, namely, the GDP, inflation rate, interest rate, money supply and exchange rate on stock market returns volatility in Malaysia. Using bi-variate and multivariate VAR Granger causality tests, their results show that only the inflation rate and interest rate can Granger cause volatility of stock returns, with a unidirectional relationship. Kennedy and Nourizad (2016) investigates the impact of exchange rate and money supply volatility towards stock market volatility on the United States from 1999 to 2010 using OLS regressions and controlling for the major driver of financial volatility. Their findings suggest that exchange rate volatility is positively related with stock returns volatility, where an increase in euro-dollar rate volatility lead to an increase in the volatility of stock returns. Meanwhile, Ahuru and Olaposi (2016) generate volatility series based on the EGARCH model to analyse the impact of interest rate, inflation rate and GDP in Nigeria. Using the cointegration and error correction models, their study found that interest rate and inflation rate have negative relationship with stock market volatility, such that an increase in the level of interest rate and inflation cause stock market volatility to be lower. However, gross domestic product (GDP) is found to have a positive relationship with volatility.

Data and Methods

The current paper uses secondary data acquired from the Thomson Reuters Datastream on individual firm stock price listed in Bursa Malaysia, also formerly known as Kuala Lumpur Stock Exchange (KLSE). Several other online databases were also used to retrieve supporting data for analysis. All firms listed in the Bursa Malaysia that have 19 years (1995 to 2013) of monthly data availability and without outliers were collected.

Volatility is estimated using the EGARCH model using data of individual firm's monthly excess stock returns $(r_{it} - r_{ft})$, where (r_{it}) is the individual firm stock returns while (r_{ft}) is the risk free rate of returns. Stock returns (r_{it}) in this analysis is quantified as the difference between

current stock price (p_1) and previous stock price (p_0), which is then divided by the previous stock price (p_0): $r_{it} = \frac{p_1 - p_0}{p_0}$. Excess stock returns of firm ($r_{it} - r_{ft}$) is defined based on CAPM model, where independent variables or risk factors included is lag one stock returns of firm (r_{it-1}) and monthly country market excess return or market risk premium ($r_{mt} - r_{ft}$) with (r_{mt}) is the market rate of returns.

Financial Liberalisation based on Capital Account Openness

Financial liberalisation is measured based on the capital account openness of Malaysia. There are two groups of measurement used, namely, i) *de jure* and ii) *de facto* measures[4]. Liberalisation that is measured based on legal and administrative restriction is also called *de jure* measure. Based on this measure, capital account liberalisation index used is based on Schindler (2009) capital account liberalisation index. Meanwhile, the *de facto* measure is the liberalisation measure based on the actual degree of financial integration. Liberalisation index based on *de facto* measure used in this research is the Foreign Equity Liability (FEL) index[5]. Foreign Equity Liability (FEL) index is introduced by Umutlu et al. (2010), and focuses on foreign equity liabilities. The data for FEL in the current analysis is taken from the External Wealth of Nations Mark II database, it is data dating to 2011[6].

Macroeconomic Factors

The current paper argues that macroeconomic forces that change the expected future cash flows of firm will alter the stock price and ultimately changes the level of stock returns and volatility[7]. There are two hypotheses that may explain a negative relationship between stock price and stock returns volatility. Based on the Leverage Effects Hypothesis, a fall in the price of stock increases the financial leverage of the firm, and in turn increases volatility. Another accepted explanation of the negative relationship is the Time Varying Risk Premia or Volatility Feedback Hypothesis[8]. This hypothesis assumes that an expected increase in the level of volatility causes the required expected return to move in similar direction. Future period risk premia will then increase due to the increase in the required expected return, and lead to an immediate fall in stock price[9].

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[4] Since all capital account liberalisation measures used are represented based on annual data, the value of liberalisation indices are treated as similar across all months in each individual year in the analysis. We believe that it is acceptable or realistic to allow capital account liberalisation to be constant across all months in each individual year, particularly in the case of *De Jure* measures of liberalisation, since regulation, and in this case policy on capital restriction, made by the authority are not frequently changed.

[5] De Facto measures, also regularly referred as 'blended measures', are quantity-based measures of the intensity of a market exposed to international financial markets. It is constructed specifically to reflect the country's actual degree of financial integration.

[6] Foreign Equity Liability measures the intensity of stock market openness towards foreign equity investment by computing the ratio of foreign equity portfolio to the market capitalisation on the local stock market (Bley and Saad, 2011).

[7] Economic innovation that increases the expected future cash flow of firms increases stock price and lowers volatility. On the other hand, discouraging economic innovation that lowers the expected future cash flow of firm will lead to a fall in stock price, changes stock returns and increases volatility.

[8] Risk Premia is the compensation required by investors to invest in the stock market.

[9] Wu (2001) said that leverage and volatility feedback effects can exist simultaneously. Economic downturn that happen in foreign market causes market traders to expect volatility in the domestic market to increase as well. Market traders will be then reluctant to buy more stocks, yet willing to sell in anticipation of a volatile market. Eventually, stock price will fall to balance the buying and selling volumes as predicted by the volatility feedback hypothesis. This fall in the price of stock would then lead to

Based on previous literature, this paper selects five macroeconomic variables that are believed to influence stock returns volatility, namely, economic development, exchange rate, inflation, interest rate and money supply.

Generalised Method of Moments (GMM)

In this paper, the Arellano Bond (1991) Two-Step First-Difference GMM and Blundel and Bond (1998) Two-Step System GMM are used to analyse the relationship between capital account liberalisation, macroeconomic factors and stock returns volatility. Below is the empirical equation of the relationship between financial liberalisation, macroeconomic factors and stock returns volatility at time t for firm i.

$$log\sigma_{it}^2 = \beta_1 logCALIB_{it} + \beta_2 logIP_{it} + \beta_3 logREER_{it} + \beta_4 logCPI_{it} + \beta_5 logBLR_{it} + \beta_6 logM2_{it} + \gamma log\sigma_{i,t-1}^2 + \alpha_i + u_{it}$$

where σ_{it}^2 is the volatility for firm i at time t, and CALIB is the capital account liberalisation index. Notably, an increase in the level of capital account openness represents an increase in relaxation of capital flows regulation. IP is the Industrial Production Index that measures the economic development of Malaysia; REER is the Real Effective Exchange Rate; CPI is the Consumer Price Index used as a proxy of inflation rate; BLR is the interest rate based on the Base Lending Rate minus CPI; and M2 is the money supply measured by the M2. Noted that$log\sigma_{i,t-1}^2$ is the past value of stock returns volatility[10].

There are four estimations in the current analysis of the impact of capital account liberalisation and macroeconomic factors on stock returns volatility. The CAPM models of stock returns volatility is regressed with two indices of capital account openness, namely, the Foreign Equity Liability index, and the Schindler (2009) index; along with macroeconomic variables. The estimations are based on Two-Step First-Difference GMM and Two-Step System GMM models.

Results

The results of estimation analyses are shown in Appendix A. The variables lag 1 and lag 2 of stock returns volatility are found to be statistically significant in influencing current stock returns volatility.

[Appendix A]

Based on GMM estimation, a 100 percent increase in interest rate will cause volatility to increase by between 1.26 percent to 3.13 percent. CPI is found to be not statistically significant in influencing stock returns volatility at any statistical significance level for the System GMM

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the increase in financial leverage ratio, and in turn lead to higher level of volatility as assumed based on the leverage effect hypothesis.

[10] This analysis transforms all independent variables in natural logarithm where the coefficient value shows the elasticity or percentage of change in the volatility when the macroeconomic factors and liberalization change by one percent. For future discussion in the current paper, natural logarithm will simply be referred as log.

models. Meanwhile, First-Difference GMM estimation suggests a negative relationship between CPI and volatility. Exchange rate and economic development are found to have negative relationships with stock returns volatility, where based on GMM results, an increase in exchange rate by 100 percent causes stock returns volatility to move in the opposite direction, between 8.33 percent to 11.43 percent. Similarly, a change in economic development causes stock returns volatility to fall up to 6.0 percent. Both First-Difference GMM and System GMM indicate not statistically significant impact of money supply on stock returns volatility.

In the case of capital account liberalisation that is measured based on Schindler (2009) liberalisation index, using First-Difference GMM, it is estimated that volatility increase by 5.4 percent if liberalisation increases by 100 percent. System GMM results indicate that Schindler (2009) index is not statistically significant effect. In terms of Foreign Equity Liability, First-Difference GMM and System GMM estimation results suggest that a 100 percent increase in financial liberalisation causes stock returns volatility to increase by 1.53 percent and 1.47 percent, respectively.

The failure to reject the null hypothesis based on the Arellano-Bond serial correlation test on the second-order suggests that the model presents no evidence of misspecification, and thus implies consistency of the estimation. In addition, the rejection of the null hypothesis of zero coefficients based on a Wald test indicates that the variables are jointly significant in determining the stock returns volatility at 1 percent level of significance.

Conclusion

Two-Step First-Difference GMM and System GMM regressions suggest that CPI is statistically not significant in explaining stock returns volatility for most of the volatility models. This result is consistent with the findings of Zulkarnain and Sofian (2012). In addition, money supply is found to be not statistically significant in influencing volatility. Širůček (2013) found that investors include money supply as a factor in their investment decision only in times of high market fluctuation. This finding is similar to Choi and Yoon (2015) who suggest that money supply do not possess predicting or forecasting power over stock returns and volatility in the case of Korea. Choi and Yoon (2015) believe that the reason why stock market volatility is not affected is because changes in the money supply do not influence the flow of information in the market[11].

Our findings show that interest rate is positively related with volatility. This implies that an increase in the interest rate causes stock returns volatility to increase. This result is consistent with the findings of Maysami, Howe and Itamza (2004) who found a positive relationship between interest rate and stock market volatility in Singapore. The finding also corresponds with Nazir, Khalid, Shakil and Ali (2010) who suggest that interest rate is negatively related with stock returns, where an increase in the interest rate leads to a fall in stock returns. The current paper argues that a fall in the price and returns of stock causes market traders or investors to become more concerned, and ultimately leads to an increase in stock returns volatility.

Our results show that exchange rate and economic development exhibit negative relationships with volatility, where the magnitudes of coefficients are larger than that of interest

[11] According to Zulkarnain and Sofian (2012), one of the reasons why some macroeconomic factors are not influencing stock market volatility is because of the existence of asymmetric information among investors.

rate. This implies that the exchange rate and economic development possess higher predictive power on the stock returns volatility[12]. The positive relationship between exchange rate and stock returns corresponds to the argument advanced by researchers such as Fang and Miller (2002) and Tian and Ma (2009). The negative effect of economic growth on volatility corresponds with the findings of researchers such as Ahuru and Olaposi (2016) whose findings suggest that the relationship between economic development and volatility level is negative[13].

Our findings also suggest that lagged volatility levels influence current volatility level. In addition, the results show that the previous values of volatility bring larger impact on current volatility level compared to the impacts from macroeconomic factors and capital account liberalisation. This finding is similar to findings made by researchers such as Albaity (2011) and Aliyu (2012) who found that previous volatility is statistically significant in influencing current volatility level[14].

The results of the current analysis suggest that the impact of capital account liberalisation on volatility based on *De Jure* measures of liberalisation based on the Schindler (2009) liberalisation Index is positive using First-Difference GMM. This result is consistent with Kim and Rogers (1995), Levine and Zervos (1998), Stiglitz (2002) and Bae et al. (2004).

The negative impact of capital openness based on Foreign Equity Liability on volatility found in the current analysis is consistent with the work of Ejara and Ghosh (2004), Christoffersen, Chung and Errunza (2004) and Umutlu et al. (2010) who suggest that liberalisation and volatility are negatively related.

The mixed results found in the current analysis on the relationship between financial liberalisation and stock returns volatility follow the results of previous researchers who were unable to reach a consensus on the direction of relationship between financial liberalisation and stock returns volatility. Notably, the current study finds that the effects of financial liberalisation on stock returns volatility are dependent on the types of financial liberalisation measures used in the analyses.

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[12] The current paper argues that the reason why an appreciation of local currency leads to the decline in the level of volatility is because the appreciation benefited firms that export their products, and the local economy in general.

[13] Kumar and Tamimi (2011) and Babatunde (2013) state that high economic growth rate tend to stabilise investment decisions, create certainty among investors, and lower volatility.

[14] The connection between previous value of volatility and its current level is anticipated since investors usually made their decision to invest by looking at the past performance of stock, and it is regarded as an important determinant to make investment decision in the stock market.

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Variables	**Two-Step First-Difference GMM**	**Two-Step System GMM**	**Two-Step First-Difference GMM**	**Two-Step System GMM**
CONS	1.3247*** (0.3789)	0.8620*** (0.2647)	0.6076*** (0.2025)	0.5524*** (0.1159)
VOLATILITY (LAG 1)	0.2417*** (0.0322)	0.2646*** (0.0279)	0.2437*** (0.0321)	0.2513*** (0.0242)
VOLATILITY (LAG 2)	0.1647*** (0.0548)	0.1723*** (0.0441)	0.1801*** (0.0449)	0.1837*** (0.0419)
INTEREST RATE	0.0313*** (0.0080)	0.0271*** (0.0077)	0.0126*** (0.0036)	0.0127*** (0.0041)
CPI	-0.1555** (0.0674)	0.0036 (0.0842)	-0.0785 (0.0537)	-0.0484 (0.0563)
EXCHANGE RATE	-0.1143*** (0.0137)	-0.1078*** (0.0130)	-0.0833*** (0.0101)	-0.0864*** (0.0096)
ECONOMIC DEVELOPMENT	-0.0603*** (0.0085)	-0.0543*** (0.0097)	-0.0406*** (0.0060)	-0.0412*** (0.0073)
MONEY SUPPLY	0.0040 (0.0169)	-0.0067 (0.0185)	0.0098 (0.0078)	0.0075 (0.0104)
Schindler (2009) liberalization index	0.0541** (0.0281)	0.0355 (0.0316)	-	-
Foreign Equity Liability	-	-	-0.0153*** (0.0040)	-0.0147*** (0.0041)
Arellano-Bond 1st order serial correlation test[a] (P-Value)	-3.5003 (0.0005)	-3.5125 (0.0004)	-3.827 (0.0001)	-3.8699 (0.0001)
Arellano-Bond 2nd order serial correlation test[b] (P-Value)	0.0928 (0.9260)	0.1143 (0.9090)	0.1679 (0.8667)	0.1676 (0.8669)
Wald Chi-square[c] (P-Value)	222.67 (0.0000)	312.06 (0.0000)	283.87 (0.0000)	376.10 (0.0000)
Time Period	1995-2006 (132 Months)	1995-2006 (132 Months)	1995-2011 (204 months)	1995-2011 (204 months)
Observation	34701	34970	54069	54338
Firm	269	269	269	269

Appendix A: Results estimation for the relationship between Schindler (2009) liberalization index, macroeconomic factors and stock returns volatility

Note: Dependent variable is the individual firm stock returns volatility estimated from the EGARCH (1,1) model. INTEREST RATE is the Base Lending Rate (BLR) minus inflation rate while CPI is the Consumer Price Index. EXCHANGE RATE is based on the Real Effective Exchange Rate and ECONOMIC DEVELOPMENT is measured by the Industrial Production Index. MONEY SUPPLY is represented by M2. All variables are expressed in natural logarithm. The analysis use two-step GMM estimation where the number of lags in the dependent variable is two (2). The number of instrument is restricted to the third (3) available lag. Windmeijer (2005) robust standard errors for dependent variables are shown in parentheses with *, **, *** indicate statistical significance at 10%, 5% and 1% level, respectively. Test statistics for Arellano-Bond tests of autocorrelation is presented with P-Value is shown in parentheses. a: The null hypothesis is that the errors in the first-differenced regression exhibit no first-order serial correlation. b: The null hypothesis is that the errors in the first-differenced regression exhibit no second-order serial correlation. c: The null hypothesis of Wald statistic is that all the coefficients except the constant are equal to zero.

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MICRO AND MACRO PERFORMANCE IN HRM: CALLING FOR FUTURE RESEARCH AGENDA

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Abstract: *Organizations value their human capital as a source of competitive advantage which leads to the influential studies in the field of human resource management (HRM).Existing literature often focuses on either micro perspectives or macro perspectives, proven by the empirical studies, but little focus being emphasised on both perspectives simultaneously. This indicates a noteworthy gap to be explored further in relation to HRM effects on multi-level organizational performance. There is still lack of empirical evidences on how employee's performance (micro perspective) and productivity affect not only overall team performance (intermediate perspective) but also organizational performances as a whole (macro perspective). In view of this, the proposed study seeks to provide analysis which would assist towards better understanding on how HRM practices and multilevel organizational performance framework. The study will focuses on content analysis based on existing literatures on HRM practices and its relationship with employee, team and/or organization's outcomes; as well as multilevel studies in the field of human resource. The articles are obtained from various online sources using the keyword Human Resource Management Practices (HRMP), HRMP and organizational performance, HRMP and team performance, HRMP and employee performance, HRMP and macro level performance and HRMP and micro level performance. Based on this analysis, often HRMP linked with organizational performance followed by employee and team performance. Hence, we provide future research agendas which could be explore more by researchers in the field of multilevel human capital performance outcomes since there is still gap of literature in this topic.*

Keywords: *Human resource management practices, multilevel performance, research agenda*

Introduction

The importance of human resource management practices as a source of value creation towards exceptional competitive advantage (Barney, 1991; Cropanzano & Wright, 2001; Speece, 2014) caught attention of past researchers to test Resource Based Theory suggested by Barney (Resource Based View, Barney, 1991). The importance of human resource have been studied extensively to reflect individual, team or firm level performance outcomes. The impact of good and effective human resource management practices has been long proven to influence individual employee productivity, team as well as organizational performance (Abdul, Khan, Khan, & Khan, 2011; Nasser, Zaied, & Elawady, n.d.; Zappa et al., 2016) However, though there are bundle of articles successfully proven the relationship between

human resource management practices with employee and/or organizational performance, but the integration between micro and macro level performance has yet to be discovered. The tendency in exploring only single level performance of organization is still high leads to the deficiency of empirical research evidence on the integration of multi-level human capital performance.

Why it is so important to study both micro and macro level performances simultaneously? Micro and macro level of HR functions have to work together to improve organizational performance (Ployhart & Moliterno, 2011). However, how micro level performance of an organization impacts macro level performance has yet to become a top priority of empirical investigation in the field of human resource management.

This conceptual paper tries to discover the point of interconnectedness between micro and macro level of HR function and organizational financial performance. Micro level performance related to employee level of performance which most likely influenced by the human resource practices implemented in the particular organization (Ali, Universiti, Norulkamar, Ahmad, & Teknologi, 2016; Tabouli, Habtoor, & S, 2017), while macro level performance often referred to as organizational overall performance (Polyhart and Moliterno 2011) including among others, financial performance and unit performance. Thus, at the end of study, the paper ought to be able to provide a holistic view of the integration of organizational multilevel performance. Besides, the study also expected to be able to provide a new agenda of study in the field of human resource management.

Literature review

Human Resource Management Practices

The current market competitiveness is vital for survival as it is needed by organizations today. Hence, evaluation of overall organizational value should be given priority. Employee which is the organizational most valuable asset (Ozolina-Ozola, 2014; Pasban & Nojedeh, 2016) and more likely to perform positively provided they are supplied with effective sets of human resource management practices(Tan & Nasurdin, n.d.). Besides, good sets of human resource management practices will lead to the successful and sustainable competitive advantage (Lin & Wu, 2014; Wernerfelt, 2013). Thus, successful organization is capable to understand the importance of human resource function as the critical factor that contributes to organizational success (Hassan, 2016).

Human Resource Management Practices, Micro and Intermediate Performance

People what makes organization sustainable. Thus, managing people in the organization is essential for organizational sustainability. Employees are easily triggered by their surrounding and they will act according to what they feel, know and what they had learn before(Chan et al., 2007; Zappa et al., 2016). In this sense, effective human resource management practices should covers employee's skill enhancing, motivation and empowerment because when combined all these areas together, leads to favourable organizational outcomes (Subramony, 2009). Skill enhancing practices are related to staffing and training as a platform for employee to enhance their knowledge, skill, abilities and other threads to serve organizational performance enhancement processes. Skill enhancing practices including job description, job training, and recruitment and selection process are sets of powerful source to enhance employee performance (Ali et al., 2016; Choon & Corresponding, 2018). Motivation can exert employees' willingness to perform better to sustain a favourable working performance (Burton, 2012) because they will better perform if they believe that they are valued and their welfare are not neglected (Blanco-Mazagatos, de

Quevedo-Puente, & Delgado-García, 2018; Burton, 2012)Hence, it will motivate employees to give back to the company by exerting positive job performance (Rabiul et al., 2018; York, 2012), productivity and loyalty (Brown, Mcnabb, Brown, & Mcnabb, 2011; Ružić, 2015; Si

& Li, 2012).Empowerment increase employee perception on the collective responsibility towards goal setting, task performance and management of the individual interpersonal process (Mathieu, Gilson, & Ruddy, 2006). Empowerment can enhance employee‘s emotional bond with organization that influences working life and will circulate the feeling of belonging among employees (Ray & Author, 2011; Subramony, 2009). Thus, as a result, motivation, satisfaction, skill and sense of belonging among individual employees to acquire excellent team performance because individuals will collectively contribute to the team performance (Magpili & Pazos, 2017). Team performance are triggered by individual skill, ability, knowledge, motivation and autonomy (empowerment) that comes from excellent HRMP (Magpili & Pazos, 2017).

Human Resource Management Practices, Intermediate and Macro Performance

The existence of human resource management practices are solely to satisfy the needs of employees in the organization, so they will be able to work and cultivate positive behaviour (Cheng & Nasurdin, 2010), which leads to positive work outcomes, such as productivity induced by job satisfaction. The point of interconnectedness between multi-levels of the organization’s performance is in bound when HRMP effectively enhance employee performance which herald task execution and ability to make decision among the team members (Macht & Nembhard, 2015; Wang, Huang, Davison, & Yang, 2018).

Turnover resulted from unhappy and unsatisfied employee will jeopardise and creates vulnerability in organizational overall performance. It is because, when they leave, the company will have to bear additional costs of hiring and train other employees (Waldman, J. D., Kelly, F., Aurora, S., & Smith, H. L., 2004). It is even worse when the employee leave with valuable knowledge and expertise (Kaçmaz & Serinkan, 2014), since it will be likely transferred to other organization (competitors). Poor HRMP will also affect team performance since individual member’s satisfaction and way of work determine the team performance (Delfgaauw, Dur, & Souverijn, 2018; Gabelica, Bossche, Maeyer, Segers, & Gijselaers, 2014). Hence, to avoid unexpected cost occurrence, the need to provide a good set of human resource management practices is vital.

Past study of Multilevel Measurement of Human Capital Model

Though there are extremely limited number of research of multilevel human capital approach, few researchers has been attempted to explore various multilevel studies in the field of human resource management. However, there are still few studies which focus on human resource management practices and its relation towards multilevel performance of the firm.

Table 1: Past Multilevel Human Capital Studies

Year	Author/s	Focus of study
2016	Jongwook Pak and Seongsu Kim	HPWS Intensity; Individual in-role performance; team performance
2016	Matthew S. Prewett, Matthew I. Brown, Ashita Goswami, and Neil D. Christiansen	Personality threats; individual level behaviour; team level behaviour
2016	Riccardo Peccei and Karina Van De Voorde	Multilevel paradigm; multilevel mediation analysis
2015	IpKin Anthony Wong	Hospitality; linkage between service provider (firm),

		employee and customer; organizational attributes and behaviour.
2014	Brenda Vermeeren	HRMP, Multilevel mediation approach analysis
2013	Alia Crocker and Rory Eckardt	Employee and Unit level Complementary
2008	Tae Young Han and Kevin J. Williams	Individual and team adaptive performance; continuous learning activities; learning climate

Source: Developed by authors

Research methodology

The analysis was conducted in two stages. The first stage was to identify related database by using keywords including Human Resource Management Practices (HRMP) and Performance, HRMP and Employee Performance, HRMP and Organizational Performance and HRMP and multilevel human resource study from various online sources such as Sage, Science Direct, Emerald Insight, Google and many other open access sites. The second stage was to filter the research article by year of publication because researcher only include the research from 2010 to 2017.

Findings and Discussions

Performance Outcomes

From the analysis done on 109 articles related to HRMP and performance, there are13 articles related to team performance, 23 articles related to micro performance and 66 related to macro performance outcomes. Most of the research on micro level performance used HRMP as indicator of employee outcomes include labor productivity, turnover and job satisfaction. In macro level performance, indicator used including organizational product/service quality, organizational commitment, innovation, financial performance and more. Financial performance indicator most likely measured by perception rather than monetary value.

HRMP Performance Indicator

Majority of the articles analysed chosed skill enhancing as influencing factor of either micro or macro performance outcomes, followed by motivation and empowerment enhancing practices. Analysis indicates that there are less than ten researcher/s in the past who includes all there HRMP performance indicators. Thus, there is still a need to perform the research that includes all HRM bundles because combined together, it will be able to produce a better and effective sets of HRMP (Subramony, 2009).

Proposed conceptual framework

Based on the analysis, below is the purposed research framework to fill-in the existing gap. Sets of effective human resource management practices will enhance individual employee performance in which will affect the team performance through their knowledge, ability and organizational fit. Good team performance will able to robust organizational overall performance.

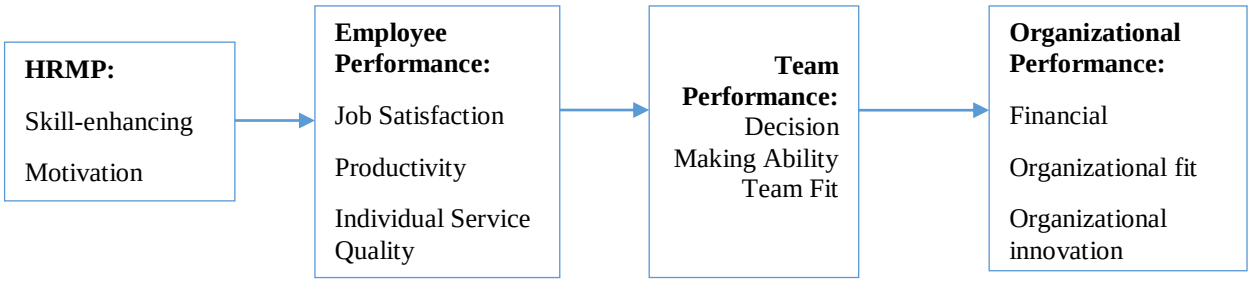

Figure 1: Organizational Multilevel Performance Assessment Framework (Proposed by Authors)

Conclusion

Our conceptual study was the result from analysis of past research in the field of human resource management practices and performance. From the analysis performed, it can be concluded that the demand to explore and investigate multilevel performance of organization, qualitative and/ or mixed method research is greatly required to fill existing literature gap and to provide a better insight of multilevel relationship within the organization.

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Appendices

	Study	IV	DV	Research Method
1.	Abdel Nasser H. Zaied et al., 2016.	Skill enhancing Motivation Empowerment	**Employee outcomes** Labor productivity	Quantitative
2.	Abdelwahab At Razouk (2011)	High performance work systems (HPWSs)	**Ma** profitability, degree of innovation and social climate	Quantitative
3.	Abdellatif Amouri & Sami Boudabbous, 2016.	Human resource management practices	**Macro** Organizational performance	Case study
4.	Aimee K G, Daniel J. S, Kareem R., 2016	Simultaneous team member training	**Team performance**	Mixed Method
5.	Alaeldeen Al Adresi and Mohd Ridzuan Darun (2017)	HRM (SHRM) practices	**Macro** Organizational commitment	Quantitative
6.	AmanuelG. T. et al., 2014	Team cohesion and team learning	**Team performance**	Quantitative
7.	Andrés Raineri (2016)	High-performance work systems (HPWS)	**Multilevel** Performance	Quantitative
8.	Antonio C. M. A et al., 2015	Knowledge management	**Firm performance**	Quantative
9.	Andreas Georgiadis & Christos N. Pitelis (2012)	Human resources	**Macro** firm performance (price cost margin)	Quantitative
10.	Abdul Ghafoor, Furqan and M. Aslam. 2011.	Skill enhancing	**Macro** Organizational performance	Quantitative
11.	Akram Ali Jouda, Ungku Norulkamar Ungku Ahmad, Khalid Abed Dahleez (2016)	human resource management practices (HRMPs)	**Micro** Employee performance	Quantitative
12.	A.AslanŞendoğdu, AyşeKocabacak, ŞükrüGüven, 2013	Human resource management practices	**Macro** Organizational commitment	Quantitative
13.	Carmen M.M. Pereira & Jorge F.S. Gomes (2012)	Human resource strength	**Macro** Organizational performance	Quantitative
14.	Cathrine Byremo, 2015	Human resource management practices	**Macro** Organizational performance	Content analysis

15.	Canan Ceylan (2013)	Commitment based HRmP	**Macro** Firm performance	Quantitative
16.	Catherine G et al., 2013	Team individual learning	**Team performance**	Quantitative
17.	Cemal Zehira et al., (2016)	Strategic human resource management (SHRM)	**Macro** Firm performance	Quantitative
18.	Cherrie Jiuhua Zhu et al., 2013	Strategic integration of HRM	Firm financial performance	Quantitative
19.	Davood Babaei et al., 2012.	Performance appraisal and organizational citizenship behavior	Firm performance	Quantitative
20.	David G. Collings , Mehmet Demirbag , Kamel Mellahi & Ekrem Tatoglu (2010)	Skill enhancing Empowerment Motivation	Organizational outcomes (financial Performance)	Quantitative
21.	David Guest & Neil Conway (2011)	HRMP effectiveness	Performance outcomes	Quantitative
22.	Derek C Jones, Panu Kalmi, Takao Kato and Mikko Makinen (2010)	Motivation Empowerment	Firm performance	Quantitative
23.	Didem Paşaoğlu	Skill enhancing Motivation Empowerment	Organizational Commitment	Quantitative
24.	Emmy van Esch, Li Qun Wei & Flora F. T. Chiang (2016)	High performance human resource (HR) practices	Firm performance	Quantitative
25.	Esmael M. A. Tabouli, Nasser Ahmed Habtoor & Mohammad Nashief S.	Human resource management (HRM) policies	Employee performance	Quantitative
26.	Evans Vidija Sagwa, Peter K'Obonyo, Martin Ogutu. 2015.	Skill enhancing Motivation Empowerment	Firm performance (Sales growth rate, market share, productivity, profitability)	Quantitative
27.	Feng-Hui Lee , Tzai-Zang Lee & Wann-Yih Wu (2010)	Skill enhancing Motivation Empowerment	Firm performance	Quantitative
28.	Fathi Mohamed Abduljlil AL-Damoe, Kamal Ab Hamid & Khairi Mohamed Omar, 2015	Human resource management practices	Human resource outcomes	Quantitative
29.	Felix Kwame Opoku and Dominic Degraft Arthur, 2015	Human resource management	Organizational performance	Interview
30.	Feza Tabassum Azmi (2011)	SHRM	Organizational performance	Quantitative
31.	Gaafar Mohamed Abdalkrim , 2012	HRM practices	Organizational performance	Quantitative
32.	Gretchen A. M., & David A. N, 2014	Individual personality	Team performance	Exploratory
33.	Gregorio Sánchez-Marín, Ángel L. et al., 2017	Skill enhancing motivation	Firm performance	Quantitative
34.	Iveta Ozolina-Ozola, 2014	HRMP	Employee turnover	Content analysis
35.	Isidro Peña & Manuel Villasalero (2010)	Human resource systems	Organizational performance	Quantitative
36.	Isabel Ma Prieto Pastor , Ma Pilar Pérez Santana & Celia Martín Sierra, 2010	Human resource management	Knowledge management	Quantitative
37.	John Delery Nina Gupta , 2016	HRM practices	Organizational effectiveness	Quantitative
38.	J. Delfgaauw et al., 2018	Team incentive and task assignment	Team performance	Quantitative
39.	Ji Hoon Song et al., 2014	Organizational learning Employee engagement	Team performance	Quantitative
40.	Jennifer A. Cowley et al., 2015	Team member interpersonal style	Team performance	Quantitative
41.	Joyce W Kariithi and Mark Odongo Ogutu, 2016	strategic human resource practices	Organizational performance	Case study
42.	Joseph A. Schmidt, et al., 2016	Skill enhancing Motivation empowerment	Employee quit rates	Quantitative
43.	K. Boies et al., 2014	Transformational leadership	Team performance	Quantitative
44.	Hugill, K., Sullivan, J., & Lourdes, M. (2018	Team coaching and rounding	Team performance Organizational performance	Quantitative
45.	Ladislav Sojka, 2015	HRM practices	firm's economic performance	Quantitative
46.	Longwei Tian et al., 2014	Members skill distance	Team performance	Quantitative
47.	Md. Zohurul Islam & Sununta Siengthai (2010)	Skill enhancing Motivation	Firm performance	Quantitative
48.	Muhammad Hamid, Sumra Maheen, Ayesha Cheem and Rizwana Yaseen. 2017.	Skill enhancing Motivation Organizational citizenship behavior	Organizational performance	Quantitative
49.	Muhammad Habib Rana, Muhammad Shaukat Malik, (2017)	Skill enhancing Motivation empowerment	Organizational performance	Quantitative

50.	Mohammad Alzyadat, Zakarya Alatyat, Jamal Alnsour,2015	Human Resource Management (HRM) practices	Organizational performance	Quantitative
51.	Mohammed Jibrin-Bida, Abdul Halim Abdul-Majid, Abdussalaam Iyanda Ismail. 2017.	Skill enhancing Motivation Empowerment	Employee performance	Quantitative
52.	Mohammad Rabiul BasherRubel , et al., 2018	Skill emhancing Motivation empowerment	Employee service behavior	Quantitative
53.	Osemeke, 2012	Human Resource Management Practices	Organizational performance	Quantitative
54.	Marinela Dropulić Ružić, 2015	HRM contributions	Financial performance	Quantitative
55.	Moazzma Mehmood et al., 2017	Skill enhancing Motivation Empowerment	Organizational performance	Quantitative
56.	Naftal Mutahi and J. R. Busienei, 2015	HRMP	Organizational performance	Quantitative
57.	Naser I. Saif, Khaled S. Sartawi (2013)	Human resource management practices	Employee performance	Quantitative
58.	Nongmaithem Robindro Singh, Biniam Kassa (2016)	Human Resource Management Practice	Organizational performance	Quantitative
59.	Paul Ogunyomi & Nealia S. Bruning (2015)	Skill enhancing motivation	Firm performance (financial and non-financial)	Quantitative
60.	Priyanko Guchait & Seonghee Cho, 2010	Human resource management practices	Intention to leave	Quantitative
61.	Rajib Lochan Dhar, 2015	High performance human resource practices (HPHRP)	Service innovative behavior	Quantitative
62.	Rashid Saeed, et al., 2013	Skill enhancing Motivation	Organizational performance	Quantitative
63.	Ramazan Yilmaz and Fatih Mehmet Bulut.2015	Human resource management	Organizational performance	Quantitative
64.	Ricardo Gouveia Rodrigues and Mário Raposo (2011)	Human resources information management (HRIM)	Firm performance	Quantitative
65.	Rosemond Boohene and Ernesticia Lartey Asuinura, 2011	(HRM) practices	Organizational performance	Quantitative
66.	Rukevwe Juliet Ogedegbe, 2014	HRM practices	organizational objectives	Quantitative
67.	S.A. Mufeed and Rafia Gulzar (2015)	(HRM) practices	Organizational performance	Quantitative
68.	S. Abdul Hameed and Dr. N. Shaik Mohamed, 2016	Skill enhancing Motivation Empowerment	Organizational Performance	Quantitative
69.	Sadaf Razzaq, Ubaid Aslam, Tanveer Bagh, Shamila Saddique, 2017	(HRM) practices	Employee performance	Quantitative
70.	Sangeeta Trehan and Karan Setia, 2014	HRM practices	Organizational performance	Quantitative
71.	Sait Gurbuz & Ibrahim S. Mert (2011)	strategic HRM	Organizational performance	Quantitative
72.	Saira Hassan.2016.	Human resource practices	Employee performance	Quantitative
73.	Sally Selden, PhD and Jessica E. Sowa, PhD. 2011.	Skill enhancing Motivation	Organizational performance	Quantitative
74.	Sarbapriya Ray and Ishita Aditya Ray, 2011	HR practice	Employee job satisfaction	Quantitative
75.	Stanton, P and Nankervis, A 2011	Strategic human resource management	Organizational performance	Quantitative
76.	Sumati Sidharth, Ruby Matthew and Ekanto Ghosh, 2016	Human resource management practices	Organizational performance	Quantitative
77.	Samuel Aryee, Fred O. Walumbwa, Emmanuel Y. M. Seidu, and Lilian E. Otaye. 2013.	High performance work systems (HPWS)	Individual level service quality	Quantitative
78.	Tamer K. Darwish, Satwinder Singh, Geoffrey Wood, 2016	HRM practices	Organizational performance (OP)	Quantitative
79.	Tanveer, Y., M.Z. Shaukat, S.A. Alvi, A. Munir, 2011.	Human resource practices	Employee performance	Quantitative
80.	Victor Y. Haines, III, Patrice Jalette, Karine Larose, 2010	Human resource practices	Voluntary turnover rates	Quantitative
81.	Yousif El- Ghalayini. 2017.	Skill enhancing Motivation	employee commitment, satisfaction, motivation and intention to quit)	Quantitative
82.	Yasemin Oraman, Gökhan Unakıtan, Ufuk Selen, 2011	Motivation Empowerment	Job satisfaction	Quantitative
83.	Y. Wang et al., 2018	Individual knowledge transfer	Team performance	Quantitative
84.	Steyn, R., Bezuidenhout, M.L., & Grobler, A. (2017)	Human resource practices	Organizational commitment	Quantitative
85.	Ugonna I. Aguta and Prof. Dr. Hasret Balcioglu, 2015	HRM practices	Organizational performance	Quantitative
86.	Vermeeren B, Steijn B, Tummers L, Lankhaar M, Poerstamper RJ, van Beek S., 2014	HRM	Organizational performance	Quantitative
87.	Yu-Ping Chen, Yu-Shan Hsu, Felix Wai-Kwong Yip	HR effectiveness	Firm performance	

	(2011)			
88.	Zhong-Xing Su & Patrick M. Wright (2012)	Effective human resource management system	Firm performance	Quantitative
89.	Abdul Rahim Zumrah, 2014	Training	Service quality	Quantitative
90.	Amin, Khairuzzaman, Zaleha and Richard. 2014.	Skill enhancing Motivation	University performance	Quantitative
91.	Ananthalakshmi Mahadevan and Fadumo Ahmed Mohamed, 2014	Skill enhancing Motivation Empowerment	Employee performance	Quantitative
92.	Choi Sang Long, Tan Owee Kowang, Rajendran Muthuveloo, Teoh Ai Ping (2013)			Content analysis
93.	Chandrakantan Subramaniam Faridahwati Mohd Shamsudin Hadziroh Ibrahim, 2011	Skill enhancing Motivation Empowerment	Organizational performance	Quantitative
94.	Eric Ng Chee Hong, Lam Zheng Hao, Ramesh Kumar, Charles Ramendran, Vimala Kadiresan, 2012	Skill enhancing Motivation Empowerment	employee retention	Quantitative
95.	Hamzah Mohammad A. Al_Qudah, Dr. Abdullah Osman, HamzahEdris M. Al_Qudah, 2014	Human resource management practice	Employee performance	Quantitative
96.	Ibrahim, H. and Zulkafli, A. 2016.	Human resource management practice	Organizational performance	Quantitative
97.	Intan Osman Theresa C.F. Ho Maria Carmen Galang, (2011)	Skill enhancing Motivation	Organizational performance	Quantitative
98.	Jalal Hanaysha, 2016	Skill enhancing Motivation Empowerment	Organizational commitment	Quantitative
99.	Jamsari Atan, Santhi Raghavan and Nik Hasnaa.	Skill enhancing Motivation Empowerment Retention strategy	Employee job performance	Case study
100.	Jason Garrett & Srinath Gopalakrishna, 2017	Individual ability	Team performance	Quantitative
101.	Kee Luan Wong, Peter S. H. T, Yin, K. N and Chee Y. F. 2013.	HRM	Organizational performance	Content analysis
102.	Leyla Farahbod and Soureh Arzi. 2014.	Skill enhancing Motivation Empowerment	Employee Job Satisfaction	Quantitative
103.	Loo See Beh and Leap Han Loo. 2013**.**	Best human resource practices	Firm performance	Quantitative
104.	Ong Choon Hee and Koh Rui Jing (2018)	HRMP	Employee performance	Quantitative
105.	S.M. Kassim and M. Mokhber.2015.	Human resource management practices	Employee outcome	Content analaysis
106.	Subramania, Faridahwati and hadziroh.2011.	Skill enhancing Motivation Empowerment	Organizational performance	Quantitative
107.	Tan, C, L and Nasurdin A, M. 2011.	Skill enhancing Motivation	Organizational innovation (product innovation, process innovation, and administrative innovation)	Quantitative
108.	Yusra Y. Lazim , 2016	Human resource management practices	Organizational performance	Quantitative
109.	Zurina Adnan, Hazman Shah Abdullah, Jasmine Ahmad, 2016	Human resource management practices	Firm performance	Quantitative

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WORK CONDITIONS AND EMOTIONAL DISSONANCE: A STUDY OF HOTELS IN SABAH

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Abstract: *While hotel industry plays an important role to the economy, it is also one of the service sectors that are prone to experience emotional dissonance due to their industrial nature. Correspondingly, it is postulated that emotional inconsistency are affected by the work environment of an organization. Therefore, this study is conducted to examine the relationship between work conditions and emotional dissonance in hotel industry. To address this issue, a structured self-administered questionnaire was distributed to 171 hotel employees by utilizing purposive sampling technique. The respondents for the study involve two categories which are front-of -the house and back-of-the-house that comprised of several departments such as producing of food & beverages (Kitchen), housekeeping, management, guest arrival and departures, along with serving of food and beverages. The data of this study is tested by using variance-based structural equation modelling technique of Partial Least Square PLS 3.0. The finding indicates that emotional dissonance among hotel employees is significantly influenced by work conditions. The paper enables the hotel managers to target these variables in their future action plan in order to reduce emotional inconsistency among hotel employees and ensure a conducive work environment. Implications of the findings are discussed and directions for future research are offered.*

Keywords: *Words Conditions, Emotional Dissonance Hotel Industry*

Introduction

The service industry, hotels in particular, is an important factor that contributes to economic growth of a country (Mohajerani & Miremadi, 2012; Lahap *et al*., 2016; Sauian, Kamarudin & Rani, 2013). It is, in fact, one of the fastest growing in the global services trade (UNWTO Tourism Highlights, 2009). At the same time, Sabah is found to be one of the busiest states in hotel industry due to overwhelming tourist arrival (Tourism Malaysia, 2016). Being one of the service sectors, hotel industry is relying heavily on labor in providing high quality of customer service. Inevitably, this would create unfavourable work environments such as constant time pressure, extensive workload, long working hours, and low job autonomy (Kristensen *et al*., 2002). This is also supported by Lo and Lamm (2005), whereby hotel employees are often exposed to poor working conditions while being offered a rather low wage (Ahmad & Zainol, 2011; Jauhari, 2006). Most studies concluded that such conditions serve as job-related stressors contribute to negative outcomes such as high turnover rate (Hoboubi *et al.*, 2017; Ariffin & Che Ha, 2014),reduced productivity (Kim, Im & Hwang, 2015), and job dissatisfaction (Cotton & Tuttle, 1986; Mobley *et al*., 1979). Additionally, some researchers also postulate that employees are emotional labourers since they are bound to manage and display their emotions as desired by organization (Lashley, Morrison & Randall, 2005). While it is functional in providing excellent services (Lashley *et al*., 2005),

emotional labour can become dysfunctional towards an employee when mismatch between felt and displayed emotion is experienced. According to Hochschild (1983) such dissonance is harmful to employee's well-being because it is a separation of authentic emotion. As such, emotion could also be another underlying cause of stress.

Literature Review

Person Environment Fit (P-E Fit) Theory

In an earlier perspective of the theory, French *et al*. (1974) theorized that the inability of an employee to adjust with work environment would eventually lead to strain. The latter version (French *et al*., 1982), however, extended two attributes that are determinant towards employee's well-being; (1) fitting of personal values with organization's supply and (2) fitting of skills with job demand. They justified that unfitting in any of the two attributes can cause job stress (Edward, 1996). There are several researches conducted to examine the relationship between P-E fit theory with several factors such as personal resources (Hobfoll *et al*., 2003), demographic characteristics (Maslach *et al*., 2001), and personality (Schaufeli *et al*., 2002). Previous research conducted in China by Yang, Che, and Spector (2008) concluded the degree of fit is related to job satisfaction, turnover intention, also physiological and psychological well-being. Another study by Pseekos, Yohwell, and Dahlen (2011) indicated that when fit between employee's personality and work environment increases, so does the level of job satisfaction. In relation to this, the theory will be utilized to further illustrate the relationship between work conditions and job stress.

Work Condition and Emotional Dissonance

In general, work conditions cover a broad range of topics and issues, from working time to remuneration, as well as the physical conditions and mental demands that exist in the workplace (International Labor Organizaton, 2016). Meanwhile, according to Koeske and Koeske (1993), it can be referred to as environmental stimuli that are perceived by employees as troublesome or disruptive. Simultaneously, work conditions that often described in hotel industry are work overload (Schaufeli *et al*, 2008; Ali & Farooqi, 2014) and time pressure (DeZoort & Lord, 1997), while, supervisor's support is commonly reported to have a crucial impact on employee's performance (Thanacody *et al.*, 2009; Blanch & Aluja, 2012; Lee & Ashforth, 1996). In any labor-intensive industry such as hotels, employees are expected to maintain their composure in any situation, especially frontline workers. Based on SERVQUAL model, among of the attributes that determine an organization's performance are empathy, reliability, responsiveness, and assurance; all of which are dependent on the behaviour of employees. Therefore, it is explainable that organization is exercising control towards employees' display of emotion (Brotheridge & Lee, 2002; Diefendorff & Gosserand, 2003). However, as remarked by Ashford and Humprey (1993, p. 96), "emotional labour is a double-edged sword". Previous studies have shown that restricting autonomy in expressing genuine feelings is related to emotional dissonance (Cheung & Tang, 2007; Giardini & Frese, 2006; Zapf & Holz, 2006) and this may become overbearing among employees (Heuven & Bakker, 2003; Bakker & Heuven, 2006). For example, employees are often expected to provide instant assistance to their customers eventhough they have excessive workload to deal. Based on a study by Cheung and Tang (2010), their study concluded that work characteristics including service culture is found to have a significant relationship with emotional dissonance. However, there is still limited study conducted to focus on the common work conditions in hotel industry. Therefore, the study proposes the following hypotheses:

H1: Time pressure is positively related to emotional dissonance
H2: Work overload is positively related to emotional dissonance
H3: Supervisor's support is positively related to emotional dissonance

Research Methodology

Sample and Procedure

The study utilizes random sampling of non-managerial operational employees among 4-star and 5-star hotels in Sabah. For this study, Thomas *et al.* (2016) and Kristic *et al.* (2015) are used to categorized the hotel departments; back of the house and front of the house, which includes several departments such as producing of food and beverages (kitchen), housekeeping, management, guest arrival and departures, along with serving of food and beverages (server). As most of these hotels are located in the main city of Sabah, thus, selected hotels are within the vicinity of Kota Kinabalu. The sample size is calculated using G* Power Statistical Software and the generated sample size adequate for the study is 146.

Before the data collection, a pre-test with 20 non-managerial operational employees was conducted to assess content adequacy. Based on feedback from the pre-test, several items were slightly reworded for a better comprehension, while, item such as work shift and number of children were edited as suggested by the respondents. An invitation email letter was sent to several hotels requesting distribution of the questionnaire to their employees, while, phone calls were made following the pursuit of confirmation upon receiving the email.

A total of 250 self-administered questionnaires were subsequently distributed, while only 205 questionnaires were retuned rendering a response rate of 82%. However, after performing a casewise diagnostics, only 83.9% of the data collected are valid for data analysis, thus reducing the number of sample size to 171.

Measure

All constructs in the study were measured on five-point Likert scale, anchored from strongly disagree (1) to strongly agree (5). The reliability test showed that these measurements demonstrated adequate levels of internal consistency reliability by showing alpha values well above the suggested cut-off of 0.70 (Nunnally, 1978). Work overload was measured by nine-items drawn from Karasek *et al.* (1998). The items were developed to assess the experience of heavy workload among employees and this measurement has been utilized by Mansour and Trembley (2016) in hotel settings. Time pressure was measured by six items from Sampson and Akyeampong (2014). Supervisor's support was measured by using a seven-item measurement from several researchers (Thompson *et al.* (1999; Karasek *et al.*, 1998; Fernandez; 1986) Emotional Dissonance was measured by using a ten-item measurement from Chu and Murmann (2006).

Data analysis and results

Characteristic of respondents

Of the 171 respondents in the study, 54.4% are female. Approximately, 115 respondents are between 18 to 25 years old, and 7.8% were between 34 to 51 years old. Most of the respondents are single while only 40 of them are married, consequently, those without children take the lead with 137. For educational level, 42.1% are SPM holder while 29.2% had completed college diploma, followed by 16.4% with STPM holder. The highest number of respondents is under serving of food and beverages department with 28.1%, meanwhile only 9.4% under producing food and beverages department. As for industry tenure, 94.2% of the respondents had been working with the organization for less than 5 years or less. It is also

found that 91.8% worked an average of 41 to 48 hours per week. Finally, most of the respondents have rotating day shift with 67.3%, followed by fixed day shift with 26.3%, the least with only 6.4% for rotating night shift.

Table 1: Measurement model

Construct	Item	Loadings	AVE	CR	Cronbach's Alpha	Mean
Time Pressure	TP2	0.751	0.695	0.872	0.779	2.921
	TP3	0.842				
	TP4	0.813				
Work Overload	WO2	0.712	0.502	0.858	0.807	3.499
	WO3	0.800				
	WO4	0.672				
	WO5	0.683				
	WO6	0.622				
	WO7	0.704				
Supervisor's Support	SS1	0.684	0.554	0.896	0.866	2.520
	SS2	0.735				
	SS3	0.713				
	SS4	0.817				
	SS5	0.748				
	SS6	0.838				
	SS7	0.658				
Emotional Dissonance	ED1	0.880	0.650	0.936	0.920	3.116
	ED2	0.897				
	ED3	0.817				
	ED4	0.872				
	ED5	0.793				
	ED6	0.853				
	ED8	0.626				
	ED10	0.668				

Note: TP1, TP5, TP6, WO1, WO8 ED7 & ED9 were deleted due to low loading.

Convergent validity

To test the reliability, convergent validity, and discriminant validity of the model, this study adopted the suggestion by Hair *et al.* (2013), in which all loadings must be higher than 0.600 and the constructed Average Variance Extracted (AVE) must exceed 0.50 (Bagozzi, 1981). According to Table 1, all loadings satisfied the requirement. Table 1 shows that the entire constructed of AVE ranged from 0.502 to 0.695, thus, the convergent validity of this research model is acceptable due to the AVE of all items exceeded 0.50.

Discriminant Validity

The cross loading measurement criteria by Fornell and Larcker (1981) were used to determine discriminant validity of this study. A higher indicator factor compared to other constructed measurement specifies that cross loading has occurred. Table 2 display that the measurement of model discriminant validity is acceptable; all square root of the AVE for each construct are higher compared to each inter-correlation value between the construct.
Thus, the Fornell and Larcker's criterion was met.

Table 2: Discriminant Validity

	ED	SS	TP	WO
ED	**0.806**			
SS	0.471	**0.745**		
TP	0.421	0.402	**0.834**	
WO	0.503	0.418	0.302	**0.709**

Note: The bold Diagonal figures represent the square root of the AVE of each variable whereas the off Diagonal figures represent variable's correlations

Structural model

In order for the study to estimate the structural model using the SmartPLS, a resample of 500 for bootstrapping module was conducted. This allows for the t-values for each construct in the model to be generated and the latent variables related to each other are specified within the model and allows the constructs and path between them to be depicted.

Hypothesis testing

The study used path analysis to test the three hypotheses. The R^2 value of 0.376 for work conditions towards emotional dissonance indicated that 37.6% of the variance explained by work conditions (time pressure, work overload, and supervisor's support). The proposed hypotheses were validated using the structural model and the level of acceptance of the path coefficients advocated by Hair *et al.* (2011) and Wetzels *et al.* (2009), whereby 0.1 path coefficient is the minimum to have an impact on the model. The suggested significant level of the coefficients must be at least 0.05 (i.e. 95% confidence level). The result obtained from Table 3 stated that time pressure is found to be positively related with emotional dissonance ($\beta = 0.242$, $t = 3.573$; $p < 0.01$). Thus, H1 is supported. Similarly, it is also found that work overload has a positive correlation with emotional dissonance ($\beta = 0.223$($t = 3.381$; $p < 0.01$). As such, H2 is also supported in this study. Finally, hypothesis 3 stated that supervisor's support is positively related with emotional dissonance is also supported ($\beta = 0.335$, $t = 4.773$; $p < 0.01$).

Table 3: Hypothesis Testing

Hypothesis	Path	Std Beta	Std Error	t- value	p-value	Result
H1	TP - > ED	0.242	0.068	3.573***	0	Supported
H2	WO - > ED	0.223	0.066	3.381***	0.001	Supported
H3	SS - > ED	0.335	0.070	4.773***	0	Supported

Note: * t-value >1.65 at p<0.1; ** t-value > 1.96 at p<0.05; *** t-value >2.58 at p<0.01.

Discussion and implications

This study attempted to explore the work conditions that lead to emotional dissonance. Based on Person-Environment Fit Theory (French *et al.*, 1982), it is hypothesized that (1) time pressure is positively related to emotional dissonance, (2) work overload could lead to emotional dissonance, and (3) supervisor's support also causes emotional dissonance among employees in hotel industry. The results of this study are found to be consistent with the theories and previous finding (Cheung & Tang, 2010; Cheung & Tang, 2007; Giardini & Freses, 2006; Zapf & Holz, 2006; Karabanow, 2000). As predicted, the result of this study showed that these common work conditions in hotel industry are leading to emotional dissonance. Hotel employees who experience time pressure and work overload in their line of work are expected to control their expression of frustration or tiredness in public, thus, concealing their true emotion to achieve organizational demand. Meanwhile, lack of supervisor's support is also found as among of the contributor towards emotional dissonance.

This is because supervisory support is needed to reduce strain (Lee & Ashforth, 1996), at the same time, become an antidote to job demands (Thompson *et al.*, 2005). Meanwhile, it is important to note that emotional dissonance has detrimental effects towards employees' well-being and organization's performance (Heuven & Bakker, 2003; Bakker & Heuven, 2006). As such, based on the findings, the following implications are proposed; (1) hotel managers can provide assessment and training programme to help employees cope with work stress by utilizing effective emotional-regulation techniques, (2) hotel managers may need to conduct formal and informal interviews to assess their level of emotional dissonance, by doing so managers are able to identify suitable preventive measures, and (3) hospitality organization should focus on the role of supervisors in workplace; provide intensive training and tests before promoting or hiring a supervisor.

Limitations and suggestion for future research

Although the results were promising, this study has certain limitations that must be considered when interpreting results. The first limitation is the industry coverage, although hotel industry is important towards the economy, there are several other sub-services sectors that has its own contribution (Sauian, Kamarudin & Rani, 2013). As such, future research should also take into account other service sectors towards their work conditions that could possibly lead to emotional dissonance. Secondly, the scope of the study only focuses on Sabah. According to Tourism Malaysia (2016), the top five states with the highest hotel guests are Pahang, Johor, Penang, Sabah, and Sarawak. The hotel work conditions among these states might be different from the central of this study. In relation to this, there is a need to discover its effect on emotional dissonance.

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MATRIX EQUATIONS IN RECIPROCAL COST ALLOCATION: AN APPLICATION IN THE TAKAFUL INDUSTRY IN MALAYSIA

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Abstract: *Shared and outsourced services have been generally allowed by the regulator (Bank Negara Malaysia, BNM) for commercial expediency and enhanced competitiveness of takaful companies in Malaysia. The different departments usually have a system of transferring the costs to each function; however the reciprocal method is rarely chosen. This study aims to analyze some of the methods of cost allocation through linear equations which will allow a large number of departmental cost transfers on Microsoft Excel. The study shows some relevant findings towards takaful operators' decision on which method to adopt. The findings illustrates how the excel solver efficiently simplifies the calculation of reciprocal method of allocation which are generally avoided due to its complex computations.*

Keywords*: Linear equations, matrices, cost allocation, takaful operators*

Introduction

Cost allocation methodologies have been discussed in various literatures and widely taught in text books and universities. In general, cost allocation is applied in businesses to transfer expenses that are usually indirect and cannot be identified specific to an activity (KLR, 2012). The components that are concerned with indirect costs usually involve general expenses and administration (Tan et. al, 2009). Most organizations spend enormous amounts of investment to cater the cost allocation strategies when in fact, there are much cheaper alternatives that could result in the company saving a huge bulk of cost and resources. Literature specific on the cost allocation methodologies in Malaysian companies are very rare and limited therefore this paper aims to contribute to the gap in this field and will focus on the takaful business.

Literature review

Conceptual Foundations

Takaful business in Malaysia generally started off from either banks offering takaful services or conventional insurance counterpart as their parent companies. This led to the formation of the structure of these organizations to be dependent upon shared or outsourced services that may cater for a number of activities. These shared or outsourced services are also known as support centers which include activities such as accounting, billing, customer support, telecommunications, training, programming and health care. The basic reason for such centers have been about optimizing people, capital, time and resources (Bergeron, 2003).

Although the shared services structure in insurance companies only initiated in 2013, the model quickly moved from only basic activities to operations such as claims, billing and underwriting. Soon, insurance companies realized that these support centers were not only helping them to cut cost, but also to aid them to be more organized and curb challenges involving compliance. This was due to the previous systems that had more constraints to insurer's compliance efforts which resulted in inefficiencies in cost management (Ernst & Young Report, 2014).

The earliest capture of shared services was in the late 1980s, when large corporations started to combine some of their back-office functions, including the accounting unit. (Redman, Snape, Wass & Hamilton, 2007). Then, in the 1990s the European and Asian firms adopted the shared services initiatives from managers in the US firms. In the early days, shared services only involved areas such as accounting and finance, but more recently have been extended to other units like IT, human resources, customer service, procurement, and public administration. (Paagman, Tate, Furtmueller & Bloom, 2015)

Both shared and outsourced services are sourcing activities and have many overlapping elements that make it difficult to distinguish between the two (Marciniak, 2013). While the former is considered an in-sourcing activity (having resources from internal sectors), the latter is more towards having certain functions' resources from outside (Truocâ & Bodislav, 2012). Another perspective to show the differences is that shared services are usually placed under large multinational companies while outsourcing are arranged by small to large companies for reasons including reduction in cost and staff efficiency. Outsourcing involves the same functions but may include other forms of services such as contact centers and data entry (Iqbal & Munir Dad, 2013)

It was only in 2013 that the insurance industry started to talk about shared services, although banks, manufacturers, and companies have already aggressively ventured on this journey to change (Ernst & Young, 2014). The different functions of *takaful* operators as mentioned in Alhabshi et al (2012), Htay et al. (2013), Lahsasna (2014) and Onagun (2014) include but not limited to finance, marketing, operations, human resources and information technology. These functions have been seen to work under the shared services or outsourcing activities of both insurance and takaful companies.

With increasing costs in catering the business, takaful companies had to depend on their conventional insurance counterparts especially with functions involving specific expertise that the conventional insurance already had for decades. Takaful was not able to operate under window-operated services due to the Shariah compliance restrictions (Frenz, Tobias & Soualhi,
2010), therefore they resorted to shared and outsourced services. However, the cost allocation methods used are still vague and some have outsourced this function to other companies therefore costs may turn to be higher than if it was done in-house.

The Cost Allocation Methods

Caplan (2007) and most textbooks have discussed the three types of allocation of services department cost which are direct method, the step down (sequential) method, and the reciprocal method. The direct method is considered the simplest method as it allocates costs based on operating departments while the interaction between support departments are ignored. It is also one of the widely used methods as it is practically easy to apply. The sequential method allocates costs to other service departments but once these are allocated, there are no costs allocated back to the initial department. This is different from the more accurate reciprocal method which actually takes into account all the costs involved including

the mutual costs between support departments. The complicated nature of the reciprocal method usually results in companies not opting for such method (Togo, 2013). However, with Microsoft Excel Solver, the matrix equations of different costs can be allocated easily.

Methodology and Data

This study is designed based on both qualitative and quantitative data. The qualitative data was needed in order to understand the allocation of costs in the insurance and takaful industry where this depended upon content analysis through literature review and also interviews from several takaful companies. The quantitative data were taken from selected companies' annual reports and Microsoft Excel Solver is used to show the reciprocal method for cost allocation can be done with only a few steps.

Theoretically, the reciprocal method for cost allocation will have a number equations, depending on the number of support departments in the company. This paper assumes that the number of support departments are three, which are key management persons, finance and marketing. Therefore, the number of equations will also be three as shown below:

+1.00K – 0.15F – 0.2M = RM 40,000,000

–0.05K +1.00F – 0.1M = RM 21,000,000

– 0.05K –0.15F + 1.00M = RM 19,000,000

Where K = Key management positions

F = Finance

M= Marketing

The equation solving through Microsoft Excel will involve two processes as follows:

1. Solving reciprocated costs using matrix functions:

$|S|$ x $|X|$ = $|K|$, where

$$|S| = \begin{vmatrix} +1 & -0.15 & -0.2 \\ -0.05 & +1 & -0.1 \\ -0.05 & -0.15 & +1 \end{vmatrix}$$

$|X|$ represents the allocated costs for each department =

$$\begin{vmatrix} K \\ F \\ M \end{vmatrix}$$

And $|K|$ is the matrix representing the cost before allocation =

$$\begin{vmatrix} 40{,}000{,}000 \\ 21{,}000{,}000 \\ 19{,}000{,}000 \end{vmatrix}$$

To solve for X, the formula involves the inverse of S, $|X| = |S^{-1}|\, x\, |K|$. This is done by typing mmult(minverse(S, K)) in Excel.

2. Allocating the reciprocated costs using matrix functions:

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$|D|$ x $|P|$ = $|A|$

Where D = $\begin{vmatrix} K & 0 & 0 \\ 0 & F & 0 \\ 0 & 0 & M \end{vmatrix}$

P = $\begin{vmatrix} -1 & 0.05 & 0.05 & 0.45 & 0.45 \\ 0.15 & -1 & 0.15 & 0.35 & 0.35 \\ 0.2 & 0.1 & -1 & 0.4 & 0.3 \end{vmatrix}$

Solving for A in this equation will allocate the costs for each department and to both sectors sharing the service. This is done by using the *mmult* function in Excel to produce a 3x5 matrix for the allocated costs.

Results

When using the reciprocal method, all departments costs are also taken into account, therefore in this case three simultaneous equations must be solved:

+1.00K – 0.15F – 0.2M = RM 40,000,000
–0.05K +1.00F – 0.1M = RM 21,000,000
–0.05K –0.15F + 1.00M = RM 19,000,000

This can be solved through cancelling one equation and reducing the three equations into two and solving for the three unknowns. However, with Microsoft Excel, this can be calculated using the mmult and minverse functions, which utilizes the matrix function.

1. Solving reciprocated costs through matrix functions:

This solves the matrix problem $|S|$ x $|X|$ = $|K|$ where

$|S|$ is $\begin{vmatrix} +1 & -0.15 & -0.2 \\ -0.05 & +1 & -0.1 \\ -0.05 & -0.15 & +1 \end{vmatrix}$

$|X|$ represents the allocated costs for each department = $\begin{vmatrix} K \\ F \\ M \end{vmatrix}$

And $|K|$ is the matrix representing the cost before allocation= $\begin{vmatrix} 40{,}000{,}000 \\ 21{,}000{,}000 \\ 19{,}000{,}000 \end{vmatrix}$

Solving for $|X|$, the formula is
$|X| = |S^{-1}|\, x\, |K|$ which uses the mmult and minverse functions in Excel as described above.
This arrives at the following figures

where $|X| = \begin{vmatrix} 48{,}966{,}589 \\ 25{,}829{,}906 \\ 25{,}345{,}765 \end{vmatrix}$

2. Allocating the reciprocated costs using matrix function

$|D|$ x $|P| = |A|$

Where

$$D = \begin{vmatrix} 48{,}966{,}589 & 0 & 0 \\ 0 & 25{,}829{,}906 & 0 \\ 0 & 0 & 25{,}345{,}765 \end{vmatrix}$$

$$P = \begin{vmatrix} -1 & 0.05 & 0.05 & 0.45 & 0.45 \\ 0.15 & -1 & 0.15 & 0.35 & 0.35 \\ 0.2 & 0.1 & -1 & 0.4 & 0.3 \end{vmatrix}$$

Once the reciprocated costs are solved, the matrix functions can then be used to allocate the costs to the departments and the *takaful* and insurance sectors using only the mmult function. This arrives at the figures summarized in the following table:

Table 1: Allocation of costs using reciprocal method

Allocation	**KMP**	**Finance**	**Marketing**	**Takaful**
Costs (RM'000)	40,000	21,000	19,000	0
Allocation of KMP	-48,966	2,448	2,448	22,035
Allocation of Finance	3,897	-25,983	3,897	9,094
Allocation of Marketing	5,069	2,535	-25,345	10,138
	0	0	0	41,267

Conclusion

The paper has shown that the application of reciprocal method for allocating costs is not a very complicated process. It requires the basic components where the weights are assigned to each support department then the costs are quite easily allocated to the different entities sharing the support functions. In this paper, it is shown that the initial costs from each of the three departments are first reciprocated among the support departments and then are allocated accordingly among departments and entities, in this case the takaful and insurance sectors.

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THE RELATIONSHIP BETWEEN CORPORATE SOCIAL RESPONSIBILITY AND COMPETITIVE PERFORMANCE IN MALAYSIAN SME: THE EMPLOYEES PERSPECTIVE

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Abstract : *Corporate Social Responsibility (CSR) are gaining great attention in the academic and professional fields. However, the focus has almost exclusively been on large corporations while small- and medium-sized enterprises (SME) have not received as much attention. Thus, this paper focuses on the relationship between CSR and organizational competitiveness in Malaysian SME companies, particularly medium sized firm within service industry. CSR is measured in four dimensions: Environment, Employee, Local Community and Customer while competitive performance is measured from financial and competitive perspective. This research is quantitative in nature where data is collected from the workers in SMEs. It was found that environment is not significant in the study while employee, local community and customer is significant to competitive performance of SMEs.*

Keywords: *CSR, SME, Competitive Performance*

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CSR is a business approach that contributes to sustainable development by delivering economic, social and environmental benefits for all stakeholders (Lexicon, 2018). It has become a very important addition to businesses and can be described as the main reason for competition and a company's ability to survive (Herrera, Larrán, Martínez, & Martínez-Martínez, 2015). It shows the relation and the impact of the business in the society and it will be stronger and more relevant when it has more connection with the core business of the organization.

CSR practise in Malaysia has increased since the announcement made by former Prime Minister, Tun Dato Sri Abdullah Ahmad Badawi in the budget speech for the year 2007. He announced that public listed companies are required to disclose their CSR activities. Apart from that, Malaysian government spent a lot of effort in sharing the importance of good corporate governance and transparency and encourage private as well as government linked corporation to install the culture of CSR into their business operations model (SSM, 2013). In the same year, Bursa Malaysia added in the requirement to disclose description of CSR activities or practices undertaken by the listed issuer and its subsidiaries as part of listing requirement. At the same time, Bursa Malaysia introduced a CSR Framework that act as a guide for companies in implementing and reporting on CSR activities. The CSR framework developed focus on four main area of CSR practice, namely Environment, Workplace, Community and Marketplace.

As a result, many institution had contributed to the reporting standard, best practices, framework, and indexes. More than 50 listed companies involved in CSR practices since year

2010 (Department of Statistic Malaysia, 2017). However, social responsibility takes place informally and not necessarily reflected in formal company commitments (Perrini, Russo, & Tencati, 2007; Observatory of the European SME, 2004). Firm of all type are called to become socially responsible, ecologically sustainable and economically competitive (Orlitzky, Siegel, & Waldman, 2011). SMES similarly play an important role in practicing CSR activities.

In Malaysia, 35.9% of all businesses are accounted by SMEs (Department of Statistic Malaysia, 2017). As a major player in the market, SMEs play an important role on initiating CSR practices in Malaysia. Therefore, conducting a research in understanding relationship between CSR and competitive performance in Malaysian SMEs is significant and relevant, as it provides information on how competitiveness can be improved.

The Hypotheses and the Conceptual Framework

The main purpose of the research is to examine the relationship between CSR reporting components and competitive performance in the context of Malaysia (SMEs Services Company) looking at employee perspective. From the traditional view of business, the main goal for a company to run a business is to maximize profits. In line with that, consumers nowadays are expecting companies with more CSR involvement as the way to giving back to the society. They expect the companies not only maximize their profits, but also give back to the society by practicing CSR. However, one of the main issues that faced in Malaysia is many companies in Malaysia are not willing to invest or engage in CSR, especially SME because they perceived that it is more costly than benefits.

The conceptual framework for the study is depicted in Figure 1.

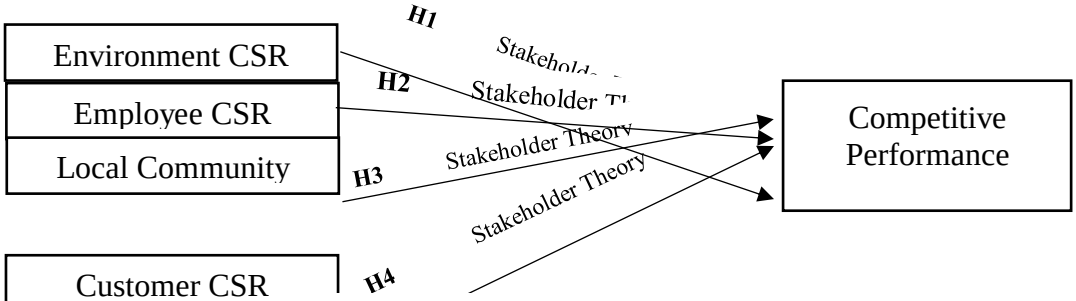

Figure 1 Conceptual Framework

As depicted in Figure 1, there are four independent variable which is environment CSR, employee CSR, local community CSR and customer CSR. All these independent variable are directly related to the dependent variable which is competitive performance via stakeholder theory.

All the independent variables are examined and they showed positive relationship between these independent variables and dependent variable via stakeholder theory (Herrera et al., 2015). This study further investigates the relevance of this CSR framework on service sectors targeted on medium firm. Competitive performance of the firms is examined on financial economic performance (sales & market share) and competitive differentiation (price/ cost, quality, delivery dependability, product innovation). Four hypotheses are developed within this research scope and are tabulated in Table 1.

Table 1 Hypotheses of the study

H1	There is a positive relationship between environment CSR and competitive performance in Malaysian SMEs
H2	There is a positive relationship between employee CSR and competitive performance in Malaysian SMEs
H3	There is a positive relationship between local community CSR and competitive performance in Malaysian SMEs
H4	There is a positive relationship between customers CSR and competitive performance in Malaysian SMEs.

The Data

A total of 210 questionnaires was distributed and 100% questionnaires were collected via snowballing method. It took three weeks to collect all the data from the sample group of 210 respondents. However, 10 out of 210 respondents who failed to pass the unengaged sample test, and missing data test. Overall, six respondents were notified for unengaged sample test and four respondents were notified for missing data. As a result, the data analysis was run via information obtained from 200 respondents.

The questionnaire contains two parts: Part A and B. Part A focused on the respondent profiling. Part B contains the dependent and independent variable constructs. Independent variable involves environment, employee, local community and customer constructs, while dependent variable looked at two dimensions: financial and competitiveness.

The Results

In this study, the number of male respondents is nearly similar to female respondents which male contributed to 52% (104 people) compared to female 48% (96 people). By analyzing the age group, most of the respondents (48%) belong in the age group between 21 to 30 years old which might imply high participation of fresh graduated in SME company workplace. Age group of 31- 40 years old is the second highest in the category with 23% while 41- 50 years old recorded 17%. The lowest age group are respondents younger than 20 years old and older than 50 years old which recorded 4.5% and 7.5% respectively.

Based on the data collected for educations level, more than half of the respondents are bachelor degree holder, 62% (124 respondents) while the second highest is master graduated with 43 respondents or 21.5%, followed by diploma accounted 18 respondents or 9%. The remaining is Ph.D holder with 3.5% and respondent with professional qualification 4%. In term of nationally, 97.5% or 195 of the 200 respondents are Malaysian. There are only 5 non-Malaysian working in the field among the 200 respondents.

Analyzing on races of respondents, Malay ethics is the largest group which contributes to 45% or 91 respondents, followed by Chinese, 40% or 81 respondents. The results is appropriate as referred to demographic of Malaysian citizen: Malay is the largest race while Chinese is actively engaged in business field. It followed by Indian, 10.5% or 21 responded and bottomed with other races with constituted 3.5% only (7 respondents).

Reviewing on the income level, the range of RM2001-3000, RM3001- 4000 and RM 4001 – 6000 shared the highest ranking which constituted 25.5%, 23.0% and 22.0% respectively. It shows that most of the respondents are middle class which earned average salary in Malaysia. There are only 17% (34 respondents) earned lower than RM2000 who are most probably fresh graduated or internship workers. Income level ranged more than RM6000 is the lowest, 12.5% (25 respondents). The hypotheses were tested using regression analysis and the result is shown in Table 2.

Table 2 Regression Analysis

	Unstandardized Coefficients	Standardized Coefficients	t	Sig. (/2)	Collinearity Statistics	
	Beta	Beta			Tolerance	VIF
(Constant)	1.254	0.522		2.402	0.017	0.224
Environment	0.107	0.072	1.037	0.150	0.729	1.372
Employee	0.291	0.199	2.450	0.007	0.528	1.893
Local Community	0.499	0.326	4.301	0.000	0.608	1.644
Customer	0.187	0.115	1.806	0.036	0.858	1.166
Adjusted R^2 = 0.304						

As represented in Table 2, the value of correlation coefficient (Adjusted R square value) is 0.304. It implies that independent variables is able to explain 30.40% of the variation in dependent variable. Overall, Environment, Employee, Local Community and Customer is explained in the rate of 30.40% on the variation of competitive performance. 69.6% might be explained by other variation which is not mentioned in the study.

P-value (Sig 0.000) lesser than alpha value 0.05 (0.000< 0.05) is deemed significant. Three out of four independent variables are significantly explained the variance in competitive performance. This is on the grounds that p-value is less than alpha value 0.05. P-value for employee, local community and customer is 0.007, 0.000 and 0.036 respectively among the independent variables. Only Environment recorded more than 0.05 (0.150) which indicates that this variable is not significant.

The results is consistent as all the variable recorded a value of more than 1.645 in t-value except Environment which indicated that all the variables are significant except Environment. Employee, Local community and Customer recorded 2.450, 4.301, and 1.806 respectively in t-value. Environment recorded 1.037 (<1.645) which implies that the variable is not significant.

Table 3 Hypotheses Summary

	Hypotheses	Results
H1	There is a positive relationship between environment CSR and competitive performance in Malaysian SMEs	Not Supported
H2	There is a positive relationship between employee CSR and competitive performance in Malaysian SMEs	Supported
H3	There is a positive relationship between local community CSR and competitive performance in Malaysian SMEs	Supported
H4	There is a positive relationship between customers CSR and competitive performance in Malaysian SMEs.	Supported

Table 3 shows the summary of hypothesis and results for each hypothesis. Only Environment is not significant which the hypothesis is not supported (p-value= 0.150 >0.05). All the other variables such as Employee, Local community and Customer have positive relationship on competitive performance in Malaysian SMEs as all supported with p- value < 0.05.

Meanwhile, Local community has the greatest influence on the competitive performance while Customer shares the lowest influence on competitive performance on Malaysian SMEs.

Conclusion

This study makes a contribution for academicians to the understanding of the relationship between CSR and competitive performance in Malaysian SME in the perspective of employees. First, it takes into account the competitive performance from two dimensions: Financial perspective and competitiveness instead of investigating on financial performance only. Also, Stakeholder theory is tested and deemed to be applicable for many CSR elements such as environment, customer, employee and local community.

It also extended the study on relationship between CSR and competitive performance conducted by Herrera et al. (2015) to Malaysia context by focusing on Malaysian SMEs companies in the perspective of employees. The researchers would have greater understanding on CSR practices in this developing country. Most Malaysian researches were only focused on big corporation which they neglect the importance of SME on CSR issues. This study opened the insight of readers on the CSR effectiveness for SMEs.

Also, the study had further justified the relationship between CSR and competitive performance in services sector in which it was emphasized by Kalaignamam et al. (2013) on the importance of CSR effort for service industry. Consequently, it confirm the theory that service sectors is more actively participating in CSR activities (Calabrese & Lancioni, 2008). However, environment CSR is not significant in SME.

Practically, the study showed that development of CSR practice in SMEs positively affects competitiveness. For instance, practicing CSR on employees, customers and local community is proven to be effectively improving companies' performance. . In today's business world, a single CSR strategy could not be competitive for the corporations to participate in this highly dynamic business environment. The managers should consider the mix of different dimensions in their CSR strategies to maximize the benefits. The findings also showed that SMEs would improve their competitiveness by implementing CSR activities, especially emphasizing local community CSR which will bring the most influential impact to the business.

In addition, the findings guide the investors in making investment decision wisely. Since there will be an impact on the brand image and reputation of companies if the companies actively enrolled in CSR activities, and it also will affect the companies' market share. Else, it is proved that most CSR activities improved competitive performance of SME. So, investors may need to evaluate the companies' performance by considering these factors.

Besides that, the findings reported in this research may be useful to policymakers because this study suggests an important opportunity to encourage the business corporations to engage and disclose the CSR, as the findings explain that the CSR components have significant impact on competitive performance. Furthermore, policymakers can use the findings to establish minimum standards for CSR compliance by corporations, whether controlled or voluntary. In turn, the corporations can gain benefits from increasing CSR effort. These effects will have short term as well as the long term impact on corporations' performance.

Recommendations for Future Research

In the future research, the data should be collected in large sample size, which included more services companies from more states in Malaysia and retest the findings of this study. With the larger sample size and covered the SMEs from more states, the result may be more representative. However, if it is to collect sample from larger region, it would require a longer period to complete the study. Moreover, to remedy the weaknesses, future researchers may

consider studying other factors or variables that may influence competitive performance such as philanthropic CSR. Additionally, the future researchers may include cultures, economics or/and politics as part of the mediator and moderator in the research framework. The results might be more accurate and exact to represent situation in Malaysian context. Furthermore, the future researchers may consider adding some subjective questions in the questionnaire or use interview approach. By using subjective questions or interview directly with the respondents, the respondents can truly provide the answers based on their opinion and answer the questions sincerely. Thus, the bias of social desirability can be mitigated.

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CORPORATE SOCIAL RESPONSIBILITY D ISCLOSURE DURING CRISIS: THE CASE OF SELECTED COMMERCIAL BANKS IN MALAYSIA

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Abstract : *This study aims to examine the corporate social responsibility disclosure (CSRD) practices in selected Malaysian commercial banks. The objectives of this research are to investigate the trend in prevalence, volumes and to explore the breadth of CSRD during the era of financial crisis via content analysis. The finding of the study will help policy maker in devising a more detail and specific disclosure requirements which will promote a more standardize and transparent disclosure practices; also act as a reference to business sector in enhancing the quality of CSRD. Data on corporate social responsibility (CSR) reporting were extracted from annual report, stand-alone sustainability report, as well as website of the selected companies. Data were converted to quantifiable table that were measured using CSR disclosure index. The information was examined from different dimensions such as years, and themes of disclosure. Conclusion drawn from the findings on the how bank react to crisis in the context of CSRD was made.*

Keywords*: CSR, Disclosure, Commercial Banks, Financial Crisis*

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This paper is motivated by the KPMG Survey of Corporate Responsibility Reporting 2015. The report shared the finding that Malaysia was among the top four developing countries that has the highest CSR disclosure (CSRD) rate, the other three countries were India, Indonesia, and South Africa. CSRD practices in Malaysia does increase since the announcement made by former Malaysian Prime Minister, Dato' Abdullah Ahmad Badawi in the budget speech for year 2007. He announced that public listed companies (PLCs) are required to disclose their CSR activities. From then on, Malaysian government spend tremendous effort in sharing the importance of good corporate governance and transparency and encourage private and also to the government linked corporation to instil the culture of CSR into their business operations model. In the same year, Bursa Malaysia ("Bursa"), formerly known as Kuala Lumpur Stock Exchange (KLSE) added in the requirement to disclose description of CSR activities or practices undertaken by the listed issuer and its subsidiaries as part of the listing requirements. Within the same period, Bursa Malaysia introduce a CSR Framework that act as a guide for PLCs in implementing and reporting on CSR activities. The CSR Framework that Bursa Malaysia developed is looking at four main area of CSR practice - Environment, Workplace, Community, Marketplace.

In Malaysia, studies done on CSRD within Malaysia local commercial context are limited, and most available research are studies focusing on the relationship between CSRD and corporate governance characteristic or influence of CSRD toward corporate performance, rarely has local studies on correlation of CSRD and Crisis. This study extends the existing work in few different ways. First, in contrast to many of the previous studies mainly focused on CSR in Malaysia banking industry using website disclosure (Musdiana et al., 2012), this paper provides empirical evidence on CSRD from the annual reports of Malaysian listed companies and also selected foreign banks. Patten (1992) has stated the social-information disclosed within the annual report as one of the most-important-mechanisms that firms can use to influence public policy without being widely scrutinized-by ordinary-people who do not have-access to annual reports.

Patten (1992) also confirms that company's CSR orientation as a reliable predictor of the--extent of--CSRD. Previous studies-have analyzed this context based on-countries like New Zealand--(Sydelle et al., 2014). This study examines and investigates that data based on the ground of legitimacy theory and Stakeholder theory in Malaysia as a developing and emerging economy. One--possible explanation is the specific--nature of Malaysian capital--market. Hence, it is important to further investigate the specific business scenario where it will influence how CSR content is disclosed.

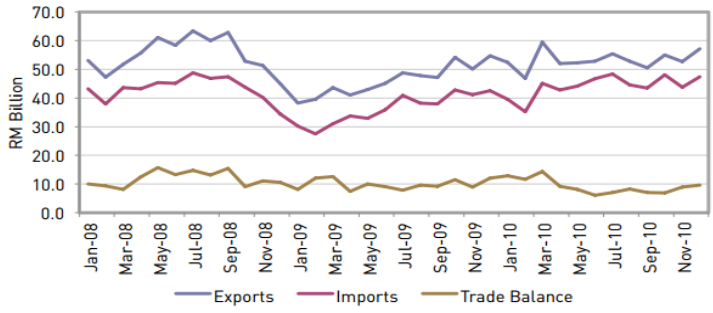
CSRD, Commercial Banking and Financial Crisis

Musdiana et al (2012) shed some light on the CSR reporting practices after analyzing the disclosure trend based disclosure detail in the year 2011, they concluded that the concept are rooted in those bank activities. The finding also demonstrate that banking institution are committed in achieving economically, socially and environmental sustainability. In another paper by Abdillah at el. (2016), stated that the extend of CSR reporting has increase and expressed that there is a noticeable different in the extend of disclosure before and after Bursa Malaysia announces CSRD as mandatory requirement in the year 2007. In the same study, Abdillah at el (2016), also found that banks are more willing to disclosure information pertaining to their employee as appose to their product quality or customer satisfaction. It may reflect that bank stress more on the importance of human resources in their day to day operation, and do not take risk in reporting information that may jeopardize their reputation.

Next Harun at el. (2013) study the quality of sustainability disclosure within Malaysian Commercial bank and they study found that most firm at that period of time did not give their full commitments in achieving a high level of sustainability disclosure as the sustainability disclosure practices is still the voluntary practices. Hence, it has become one of the reason why banks did not take this matter seriously. This is because some of the decision makers of banks think that by achieving a high sustainability level does not give them any significant gain towards their banks. Thus, in order to achieve a high sustainability performance in a bank, they have to balance their financial performance and other factors such as human right and protecting the environment. That is what sustainability is all about.

Despite--the--positive outlook on the Malaysia's banking sector, and macroeconomic conditions, the country was not spared the worst of the crisis. Malaysia have been well-known for its highly trade-dependent economy, and having almost fully liberalized its exchange rate and capital account after the year 2005, the nation was hit hard in the trade and investment

sectors. Exports reduces by 45%, to an amount of approximately RM 38 billion in January 2009 from RM64-billion in July 2008. Imports are force to decline marginally by the same percentage over this period so that the trade surplus remained positive.



Source: Bank Negara Monthly Statistical Bulletin (various years).

Figure 1: Data on GDP for the year 2008 to 2010 (Bank Negara, 2010)

As such, the objectives of this research are two folds, first is to investigate the trend in prevalence, and volumes in CSRD information during, before and after crisis and second, to explore the breadth of CSRD disclosure during crisis.

Methodology

This paper aimed to investigate the extent of CSR disclosure, and to observed the difference in the extent of reporting approach. It comes in the form of length, volume, and scope, hence the best method for this paper is content analysis. Content analysis was used in many studies of the similar area (Dias at el., 2016; Sydelle at el., 2014; Sadou at el., 2017). Sweeney and Coughlan (2008) supported the use of content analysis by making the sharing their finding that content analysis is commonly used to determine the presence of certain words or concepts in the text; and most commonly used method for research of CSR Disclosure.

The companies selected for this study are based on the total of 27 organizations which were given license by Bank Negara Malaysia (BNM) to operate as commercial bank in Malaysia. Out of 27 companies, only eight banks are holding the status of local commercial banking institution. These eight institutions were selected as the sample of this study. The data were collected through the annual report as well as standalone sustainability report to represent the updated availability of the information.

Table 1: List of selected local commercial banks in Malaysia (BNM 2017)

Licensed Commercial Banks in Malaysia (Local Commercial Bank)	
No.	Name
1	Affin Bank Berhad
2	Alliance Bank Malaysia Berhad

(ISBN: 978-967-15744-3-0)

3	AmBank (M) Berhad
4	CIMB Bank Berhad
5	Hong Leong Bank Berhad
6	Malayan Banking Berhad
7	Public Bank Berhad
8	RHB Bank Berhad

Data Analysis

Bursa Malaysia in year 2006 issued the four-dimensional framework, namely, workplace, marketplace, community and environment. This framework are derivative of Carroll's (1991 & 1999) model and Freeman's (2014) stakeholder theory. In this paper, the volume and trend of disclosures will be evaluated by scoring each disclosure using disclosure allocation index and scale. In most cases, it will involve in highlighting any relevant sentence meeting the specification of the disclosure index and then coding the sentences in accordance with the selected allocation assessment scale. Thus, the narrative text is placed into categories in order to make conclusions about the thematic content based on the classification scheme incorporated in the disclosure index and the assessment scale. This method will assist in classifying quantitative information into certain categories in order to provide more understanding regarding the disclosure practices (Guthrie et al., 2004). As stated by Hooks and Van Staden (2011), a disclosure index contains a list of data items that should or could appear in company reports.

Refer to Figure 1, it is how the volume is to determine for two column reporting format, few bank's annual report was examine to formulate on how the volume should measure, also referencing to previous studies, as this studies try to understand the volume and trend of disclosure, the content will be measuring volume covered in a page, and each page are split into six segment. For example, in Public Bank 2017 annual report, the environment covers one and a half pages of 6 pages, it will be considered 25% of the organizational effort to spend on environment content. And the data will be recorded as Figure 2, according to the percentage of content coverage for each category.

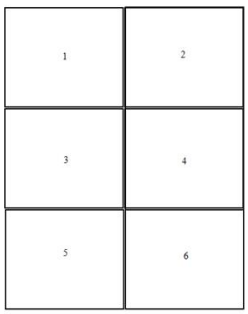


Figure 1: Segment for Volume Calculation for Two Columns Disclosure

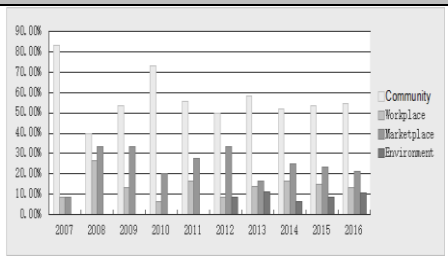
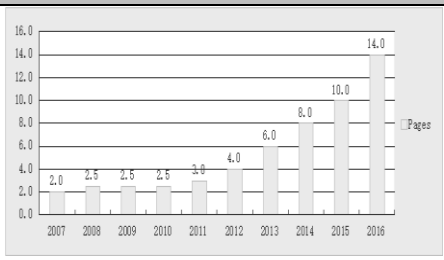
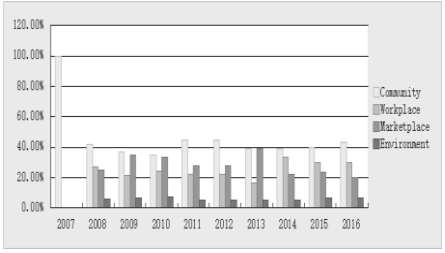
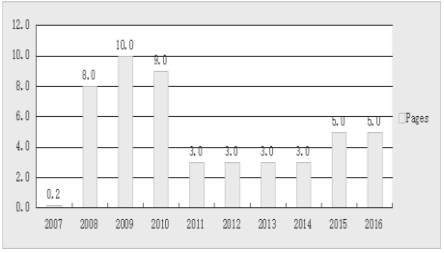
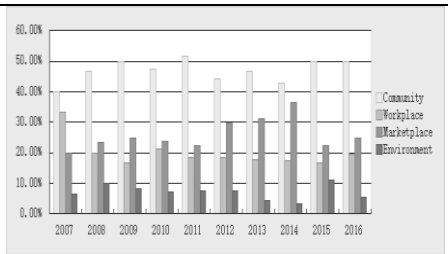
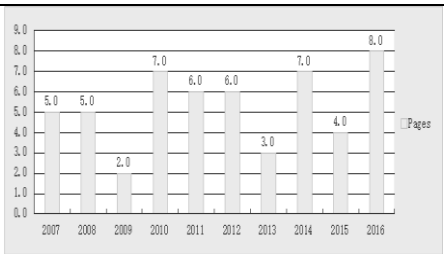
2007				
Community	Workplace	Marketplace	Environment	pages
56.25%	22.92%	16.67%	4.17%	
4.5	1.833333333	1.333333333	0.333333333	8
8	8	8	8	
2009				
Community	Workplace	Marketplace	Environment	
51.67%	25.00%	13.33%	10.00%	
5.166666667	2.5	1.333333333	1	10
10	10	10	10	

Figure 2: Recording Tool for Volume Calculation

Findings

Table 2 depicted the trend in CSR disclosure for the eight selected commercial banks. Two different diagram are produced which representing the trend of CSRD by dimensions: Community, Workplace, Marketplace and Environment; and the volume (number of pages) of CSRD.

Table 2a: Trend of CSRD by Dimensions and Volume of CSRD for the First Five Selected Commercial Banks in Malaysia

Banks	Trend of CSR Disclosure by Dimensions	Volume (pages) of CSR Disclosure
Affin		
Alliance		
Ambank		

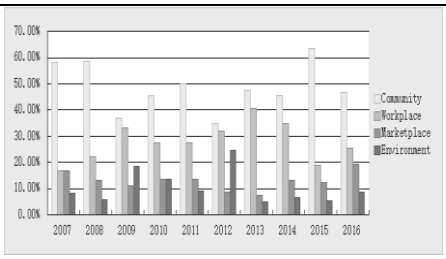
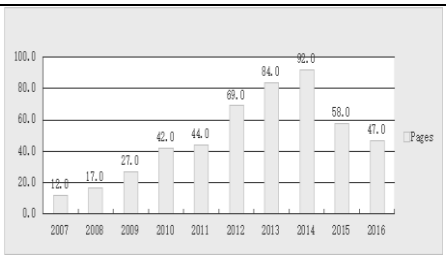
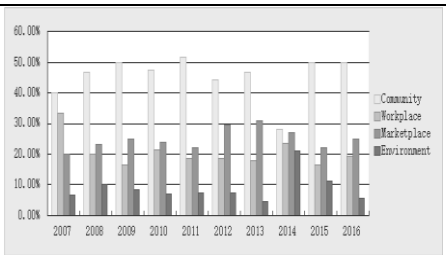
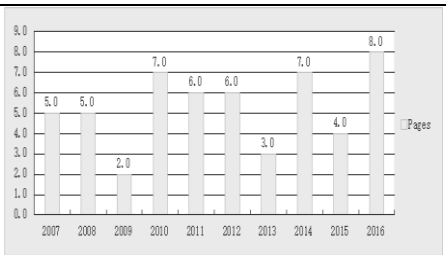
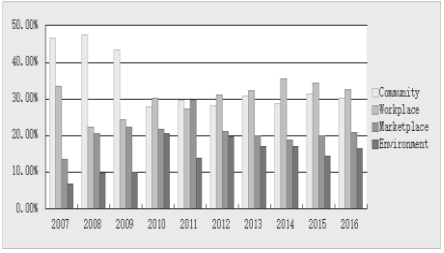
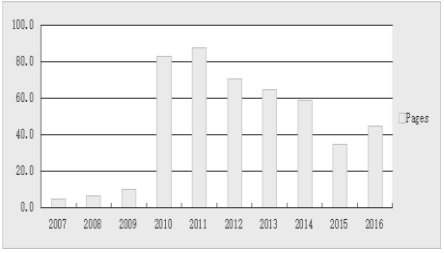
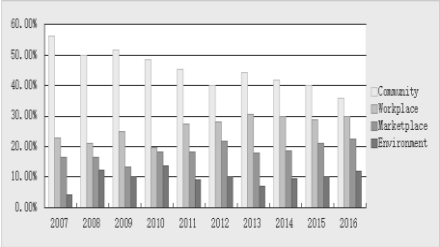
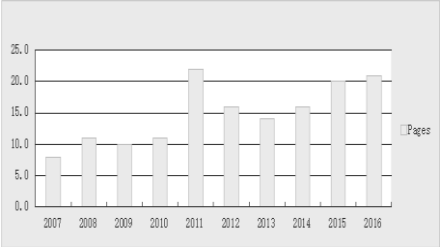
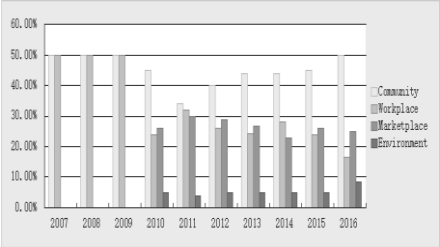
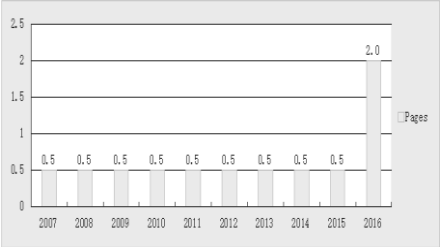
CIMB		
Hong Leong		

Table 2b: Trend of CSRD by Dimensions and Volume of CSRD for the First Five Selected Commercial Banks in Malaysia

Banks	Trend of CSR Disclosure by Dimensions	Volume (pages) of CSR Disclosure
Maybank		
Public Bank		
RHB		

Conclusion

Referring to the trend-line in Figure 3, it is noticeable that most the bank increase their disclosure or CSR activities over time.

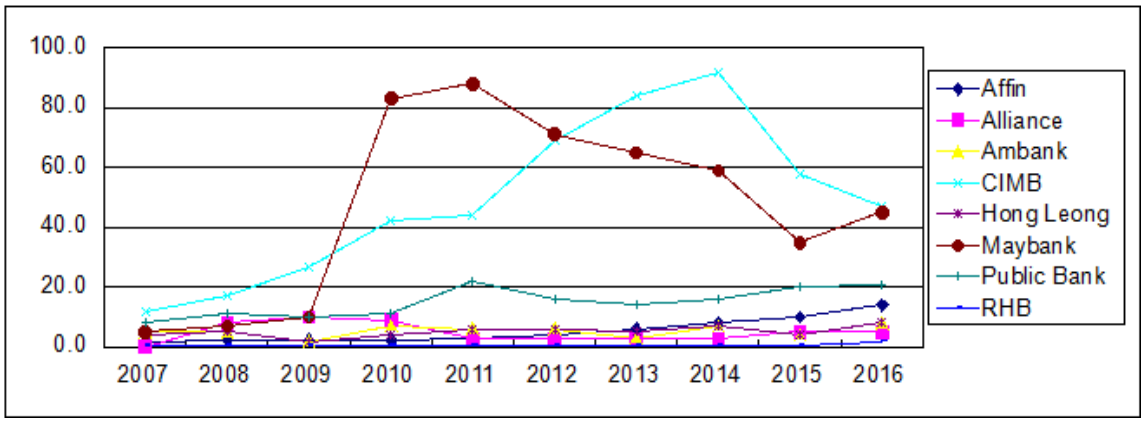


Figure 3: Comparison of Volume (pages) among All the Selected Commercial Banks

The data shows that the CSR disclosure content, volume and quality increase overtime; only one out of eight banks that is impacted by the financial crisis. But this studies understood that CSR in the local commercial bank sector is still in it infancy stage.

All eight of the banks still need to understand the importance of CSR disclosure, and it benefited the business and the stakeholder. It is also important that the activities or disclosure are relevant or material, means that the action taken are really making the difference of the respective parties; disclosure format has to allow the reader to measure or compare against historical data or competitor; content must be clear, reliable and timely, because it is pointless for reader to know, or compare data that are no longer valid or relevant at that point in time.

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COMPETITION IN DIGITAL ECONOMY: THE STATE OF MERGER CONTROL ON CONSUMER TRANSPORTATION IN ASEAN

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Abstract: *The development digital economy revolution supported by advancement of innovative technology has altered the business pattern as well as the consumer market, specifically the system to purchase products, goods or services. Digitization has disrupted and altered the consumer transportation market pattern, safety, service as well as the price determination methods. Digital market comprised of platform-based business model, multisided markets network effects and economies of scale. The new trend has rendered competition issues more complex and impacted both positively and negatively the old economy pattern, traditional business setting and the related consumer welfare. The paper examines the scope and efficiency of merger control in the digital era under the competition law and policy within the Competition Act 2010, Malaysia; Law Number 5 of 1999 on Prohibition of Monopolistic Practices and Unfair Business, Indonesia and Trade Competition Act B.E. 2560, 2017, Thailand. The paper reviews the state merger control and impact of digital merger cases based on the Uber-Grab merger experience in South East Asia (SEA). The paper discusses the impact and challenges of algorithmic pricing, collusion, disruptive innovation and anti-competitive merger on competition law and policy. Hence, appropriate competitive regulatory principle and policy is required to control merger, regulate anti-competitive pricing, and reduce domination and safe-guard consumer welfare in consumer transportation industry in Malaysia, Indonesia and Thailand.*

Keywords: *competition law, merger, digital economy and technology.*

Introduction

Competition Law (CL) primarily designed or intended to prohibit, restrict or regulate actions having the purpose or effect of monopolization or restraint of trade or lessening of competition through a merger or acquisition (Law insider).In which, the competition policy and its instruments such as anti-competitive prohibition, rule against dominance and anticompetitive merger becomes the centre stage of discussion. Competition Law and Policy (CLP) have been enacted in almost all ASEAN nations under the ASEAN Economic Integration (AEC) agreement. Competition law is recognised as an integral part of ASEAN member nation's economic liberty.

A comprehensive competition law should encompasses legal provision designed or intended to prohibit, restrict or regulate actions having the purpose or effect of monopolization or restraint of trade or lessening of competition through a merger or acquisition Competition Law are designed or intended to prohibit, control, restrict or regulate restrictive agreements, actions having the purpose or effect of monopolization or restraint of

trade or lessening of competition through a merger or acquisition effecting domestic or international trade or economic development. (Law Insider) (UNCTAD, 2007).

The digital revolution has brought about a technological and economic revolution, whose potential benefits and dangers are rather unpredictable. Hence, rendered competition issues more complex and have significantly affected the old economy pattern, traditional business setting and the related consumer welfare. Uber and GrabCar entered ASEAN with their innovative digital technology allowing their client to use the application on mobile phone or computer to book for transport or other services. The digital application provides direct response to the direct need of customers with their wifi connected lifestyle and resolved various problems affiliated to the traditional taxi sin the region.

Uber and GrabCar introduced the trend of the sharing economy which promoted cost reduction and efficiency in consumer transportation industry. However in view of the recent Uber-Grab merger transaction, ASEAN countries are taking a closer look at the proposed merger, (ASEAN Today,2018, 1 May) in which both companies now face challenges, but the deal is not dead. As a result Grab will extend its leadership as the most cost-efficient Southeast Asian (SEA) platform, as it takes over Uber's operations and assets in Cambodia, Indonesia, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam. The paper reviews the state merger control within the scope of the competition law and policy in the digital era based on the Uber-Grab merger case in SEA. The paper highlights the challenges posed by digital economy in ASEAN and discusses the resulting impact of the anti-competitive pricing, market domination on consumer welfare and competition specifically in Malaysia, Indonesia and Thailand.

Impact of Digital Economy on Competition: Merger and Acquisition

The revolution of digital technology have posed various new challenges on how legal rules and regulations are to be adapted to the new characteristics of the digital economy with its manifold disruptive innovations and it related new critical role of data and data analytics (Kerber, Wolfgang (2017). This new trend has caused among others a significant decline in competition by precipitating concentrated market or market dominance, rising market power of large firms and slowing business dynamism (Foda, K and Patel, N, 2018). Hence, the theoretical and empirical evidence supports the argument that in many markets with standard competition the network effects promotes dominant entity to grow stronger and tips them toward a single, winner-take-all standard in the market (Liu Charles, Z et al., 2012).

Digital economy present challenges on how to think about and implement competition law and policy. Hence regulatory provisions and its interpretations objectives previously aimed at ensuring a level playing field and fostering a dynamic and inclusive economy must be revisited and reviewed to adjust to better reflect a growing reality. Competition regulators must address the potential for scale of digital platforms, importance of intangible capital, (Foda, K and Patel, N, 2018) market concentration and transactional decisions of the consumers (when providing their personal data) (Ritter, E and Slyom, I, 2018) to ensure level playing field and protect consumer welfare.

Digital Economy Impact on Competition Law Enforcement: Case study of the Uber Grab merger in Malaysia, Singapore and Thailand

The Uber Grab-Merger Chronology in SEA

The most prominent disruptive digital economy that altered**,** challenged the competition policy and shattered the consumer welfare is the Uber and Grab digital platform market in consumer transportation and online food industry in SEA. Grab is well known South East Asia's (SEA) firm with millions of users across eight countries (BBC News, 2018, 26 March).

Their e-hailing services have caused dissatisfaction among the incumbent taxi drivers and created unfair competition in the consumer transportation industry in SEA.

Uber withdraw from Southeast Asia (SEA) on March 26, 2018, by way of merging with the local rival Grab and selling its asian operations. In the merger contract, Uber secured a 27.5% stake in Asian based Grab and a seat in the Grab's Board of Directors (Kollewe, J., 2018 26 March). The merger agreement appeared as "asset light" because did not entail Grab's acquisition of Uber's vehicles, its employees or its contract with Ubers drivers. The deal although did not indicate as to whether it included any of Uber's algorithms, the experts predicted it would have negative implications on competition and deserves careful scrutiny (Ong, Burton, 2018 April 13). The merger notably, predicted to set SEA to undergo a massive structural overhaul of its tectonic proportions (Ong, B, 2018 March 30) and a hike in consumer prices. Although the real effect of their market concentration was unclear but potentially on the long run would restrict competition and adversely affect the consumer welfare. Study revealed, it is difficult to distinguish anti-competitive motives from normal business strategies in digital economy merger transactions because it involves future markets (Gorp, N. V. & Batura, O., 2015) (Lee, W., 2018).

Singapore raised serious concerns over Uber-Grab merger and feared the resulting repercussion of the growing market dominance (by forming alliance with the taxi drivers' companies) in consumer transportation. Singapore authorities admitted they have overlooked the ride-hailing apps to protect the interests of commuters and drivers. They also expressed dissatisfaction with the basic regulatory regime which has limited coverage and licensed only the drivers of the ride -hailing apps and vehicles. Singapore fears if one operator becomes dominant, commuters may have to bear higher fares at lower service standards and may have to put up with the conditions set by the merged company. The Competition and Consumer Commission of Singapore (CCCS) regarded the merger deal as anti-competitive and declared as an "un-notified merger transition" under their Competition Act (The Straits Times, Singapore 2018, 14 April) (The Straits Times, Singapore, 2018, 13 April) Drivers are left confused and found to have differing views on whether their takings and bookings collectively on both apps have changed since the acquisition. (The Straits Times (2018, May 04,) (Jon, Russell. 2018, 25 April). The Competition Act was enacted to provide a generic competition law to protect consumers and businesses from anti-competitive practices of private entities. Merger is regulated under the 54 of the Competition Act. This section prohibits mergers and acquisitions which substantially lessen competition and have no offsetting efficiencies (CA 2004)The general assumption is not all mergers give rise to a competition issues because as some mergers either pro-competitive (because they positively enhance levels of rivalry), or are competitively neutral. Hence CCCS has pre-notification procedure to assess whether the merger would substantially lessen the competition, e.g. resulting in an increase in prices above the prevailing level, lower quality, and/or less choices of products and services for consumers to decide its anti-competitive infringement. In this respect CCCS found Grab-Uber creates exclusivity arrangements, which potentially burden new entrant to spend a lot of money to build up driver and rider networks similar in scale and size to the incumbents (Reuters, 2018, 27 July).

Finally on 24th September 2018, CCCS after month-long investigation conclusively decided the Uber-Grab transaction as anti-competitive and infringed Section 54 of their Competition Act (CA 2004) for substantially reducing the competition in ride-hailing platform market in Singapore. Uber (RM19.97 million) and Grab (RM19.36million) was fined in total SG $13 million and ordered Grab drivers not be tied to Grab exclusively besides removing all the exclusivity arrangements with all taxi fleets. Grab was further instructed to maintain its pre-merger pricing algorithm and driver commission rate to prevent excessive price surge on consumer. CCCS also empirically found Grab's fare increased 10-15 percent

after the merger and their market share grew to 80 percent in Singapore. The regulators assessed the average price for consumers after accounting for subsidies and discounts although Grab denied and defined it as posted fare before any discounts (Russell, J. 2018, Star Online, 2018, 24 September).

The CCCS's decisions had sent a wave of warning to other SEA governments and triggered their respective competition regulators mainly Malaysia, Indonesia, Vietnam, Philippines and Thailand to monitor Grab and Uber merger. The CCCS already received "numerous complaints" from both riders and drivers on decrease in promotions and incentives, reflecting Grab's ability to increase effective prices after the merger (Channel News Asia, 2018, 5 July). This case illustrates the resulting phenomena of the so called perfect competition in digital economy, which signifies if unmonitored could lead conscious parallelism which would legitimize and aid anti-competitive price-collusion and prejudice consumer choice.

However the Uber - Grab digital transaction is only so far been effectively curtailed in Singapore, which is only one of the eight markets or nation in SEA. Malaysia, Indonesia and Thailand have yet to make any conclusive decision on the anti-competitive repercussion in their consumer market. Hence, what is the state of control merger control on their consumer transportation requires further examination of the respective competition law and the regulators policy as well as the will power in the respective country.

Impact and Challenges of Uber –Grab merger in Malaysia

Malaysia following CCCS finding had reacted by calling on the Malaysian Competition authority (MYCC) to investigation and monitor UBER-GRAB merger for anti-competitive repercussions. (Russell, J. 2018, Star Online, 2018, 24 September). Although Malaysia have a comprehensive competition regulation under the Competition Act 2010 (CA 2010), it does have any specific provision to control anti-competitive merger although recommended in the ASEAN Regional Guidelines on Competition Policy (RCGP) (ASEAN, 2010)... The object of the Act is to promote economic development by promoting and protecting the process of competition, thereby protecting the interests of consumers. The Act regulates anti-competitive agreements and abuse of dominant position under the name of anticompetitive practices. Merger control is not within the purview of the Act so the Malaysian Competition Commission (MYCC) does not have any merger control mandate. However, since mergers are not expressly excluded from the scope of the CA 2010, competition regulator could only review and enforce powers in respect of behavioural conduct but not the merger control mandate (Kandiah, S. 2017). Therefore there is huge vacuum with respect to anti-competitive merger control mechanism as to the allocation, scope and prohibition. This caused MYCC with no power over the merger transaction or their terms of agreement like the other ASEAN neighbours. However notably there are some sector-specific laws and guidelines to regulate the antitrust aspects of mergers for aviation services, and communication and multimedia sectors, enforced by the Malaysian Aviation Commission (MAVCOM), and the Malaysian Communications and Multimedia Commission (MCMC) respectively. This may not aid any help to reduce the strain in the present consumer transportation case.

The principal of CL on consumerism although different from Consumer Protection Act (CPA 1999, Malaysia) its essence of protecting market competition from any form of restraints trickle down to consumer protection on the pricing and choice. Hence, CA 2010 prohibits firstly, anti-competitive conducts or agreements under Section 4(1) any horizontal agreements between enterprises which have the objective to fix, directly or indirectly, a purchase or selling price or any other trading conditions such as share market or sources of supply, limit or control the production, market outlets or market access, technical or

technological development, investment or perform an act of bid rigging under Section 4(2). Secondly, it prohibits the abuse of dominant position under Section 10 (1) by an enterprise, whether independently or collectively, which amounts to an abuse of a dominant position in any market for goods or services (CA 2010).

Price fixing is controlled within the scope of Section 4(1) of the Act if the object or effect significantly prevent, restrict or distort competition in any market for goods or services. Is this control mechanism having sufficient regulatory tools to regulate anti-competitive digital repercussion? Specifically the algorithmic pricing and anti-competitive merger phenomena in digitalised knowledge economy to protect consumer market is questionable? MYCC, itself admitted that they have no jurisdiction or authority over the ride- hailing firms merger (The Sundaily, 2018 10 April) but agreed to (The Malaysian Insight., 2018, 6 June) to examine Grab's operation for any anti-competitive agreements following the Singapore's findings on violations of competition laws. MyCC claims it is empowered to investigate and take action on parties abusing the monopoly status and violate Section 2 of the Competition Act 2010 if they abuse of a dominant position (The Edge, 2018, 13 July).

Recent development in Malaysia suggest that Grab's attraction as a cheap and efficient way to travel is questionable because passengers complain that the popular ride-hailing service has become more expensive than the conventional taxis. The validity of the complaints evidenced during checks showed that some trips on taxis were cheaper by half the prices offered by Grab. Whereby, one-way trip which takes about 10 minutes (about 5km) costs about RM7 only using a taxi, compared to Grab's service which now costs about RM14 (Nurul Azwa Aris FMT,2018 9 July).So our we losing control on our digital economy or should it be left to the market competition taking its own terms of event. So what's the fate of the consumer transportation industry and e-hailing consumer is still rather a muddy situation especially without the right legal instrument to regulate and control it. Malaysia's Land Transport Authority assured that it is going to work closely with relevant consumer and various regulatory agencies such as the MYCC to safeguard passengers from unfair terms (.Karamjit Singh March 27, 2018)

Merger had been so far only been regulated as corporate action with respect to protecting the shareholders in Malaysia. The law governing mergers and acquisitions, mainly in Part IV Division 2 of the Securities Commission Act 1993 and the Malaysian Code on Take-overs and Mergers 1998 which operates only to protects the rights of the parties' involved not market or consumer welfare(Wan, Wan, & Ernie, 2013). Hence Grab-Uber merger cannot come within the scope of the Competition Act 2010 or the MyCC jurisdiction. Furthermore there is no notable evidence for a cause of infringement under Section 4 and Section 10 (CA2010) prohibition on the merger deal itself, as MyCC have no access to their merger agreement. The Competition Act 2010 itself is observed to be relatively still at an infant stage with very limited case-laws and interpretations for forming a constructive arguments on Grab.

Impact and Challenges of Uber –Grab merger in Indonesia

Indonesia comparatively is the oldest competition regime in ASEAN. Indonesia also feared similar threat on their consumer transport industry. Indonesian Go-Jek, enters the market right after the merger was confirmed to launch its services in Singapore and welcomed the CCCS decisions (Retsy Woro Yuniar, 2018).

Indonesian Antimonopoly and Unfair Business Competition (Law No.5/1999) has provisions on the merger, acquisition, dominant position or controlling shares. The Indonesian Commission (Komisi Pengawas Persaingan Usaha or KPPU) have even published its Commission Regulation on Merger and Acquisition in Perkom No.13/2010 in 2010.The Law No.5 was enunciated based on the principles of the State Philosophy and the 1945

Constitution to promote economic democracy by providing equal opportunity (among the large, medium, and small-scale business enactors) and level playing field between the interests of business actors, efficiency and consumers welfare. The Act provide prohibits monopolistic practices and unfair business competition and create "effectiveness and efficiency in business activities" (1999, Law No.5, Indonesia).

Law No.5/1999 applies either to enforce the law or provide advice to the government and or ministry office with regard to competition aspects. Law No.5/1999 regulates prohibition of anti-competitive conducts or agreements, abuse of dominant position including merger and acquisition control. Article 26 to 29, Law No.5/1999 explicitly provides for regulation for merger, acquisition and liquidation (plus spin off under Corporation Law No.40/2007). While Article 29, instructed for Government Regulation to be issued to implement Article 26-29 concerning merger and acquisition (1999, Law No.5, Indonesia

The highlight on the digital economy issues in Indonesia is also similar to Malaysia with respect to the online transportation, namely on motorcycle and cars. Although motorcycle was ruled by the Constitutional Court as not within the transportation (Constitutional Court Decision No.97/PUU-XV/2017), few online transportations namely, GoJek/Go-Car, Grab and others still utilise car as well as motorcycle. PT. Indonesian based Gojek which was established in 2010 expanded widely via on-demand mobile platform. Gojek uses advance application and provides variety of services such as payment, food, logistic etc. Gojek/Gocar is affiliated and works jointly with biggest taxi company in Indonesia, Bluebird (Endang Wahyusetyawati, 2017). Uber entered the market in 2014, but later became part of Grab which also provides transportation service utilizing motorcycle and passenger's car in Indonesia. (Kompas, 2018).

Prior to the Uber – Grab merger, Indonesia already faced various demonstration and resistance from the local e-hailing consumers and drivers against the minister's regulation (Minister of Transportation Regulation No: UM.302/1/21/Phb/2015) and orders (Law No. 22 /2009 on Traffic and Transportation with Government Regulation No. 74/2014 on Road Transportation) which prohibited Gojek and Uber. Article 138 (3) Law No. 22/2009 stated that road transportation could only be served with public transport and not private transportation. While Article 139 (4) UU 22/2009 stipulated that transportation provided must be conducted by state own companies, regional state companies or other type of legal entities. Article 173 (1) Law No. 22/2009 stated that transportation provider company must possess transportation permit to run their business (2009, Law No.22).

The Indonesian Law No.5/1999 enforcement on merger or acquisition only applies if and when, there is evidence to prove that the market power is abused or competition is reduced. Therefore, the enforcement only takes effect after the corporate actions to merge or acquisition is performed. However, studies have established that merger and or acquisitions usually increases market power or create monopoly power (CCR, 2010). Therefore, it is very essential for KPPU to address the corporate action in order to respond to its consequences which may affect competition, pricing mechanism and consumer welfare.

In Indonesia, Article 28 Law No.5/1999 does not specify the merger regulation but merely a reminder to check on its consequences. If the merger present negative effect on competition, the KPPU empowered to cancel or nullify the merger under Article 47 (2)e and apply administrative sanctions such as cancellation, fines and damages. Article 29 requires post-merger notification within 30 days. Article 28 and 29 Law No.5/1999 is a lex imperfecta, because its implementation only takes effect after the Government Regulation is instructed under Article 28 (3) and 29 (2). The Government Regulation also instructed KPPU to prepare its implementation regulation. Despite the various debates and differences on the recognition of the online transportation services between the Minister of Transportation and online industry (driver transportation association), as well as the Constitutional Court and Supreme

Court judicial review decision on the Minister of Transportation Decree No. 108/2017(on recognition of the motorcycle online transportation) the Uber- Grab merger came through (Tirto, 2018).

In Article 5 Government Regulation No. 57/2010 and Article 29 (1) Law No. 5/1999 requires a written Notification to KPPU to be submitted at least 20 (thirty) days since the effective date of the merger. The mandatory notification shall become effective if the asset value reach Rp2.500.000.000.000, 00 or around 2 Million Rupiah and the sales value is more that Rp 5.000.000.000.000, 00. If the transactions reach the threshold as stated in Article 5 PP 57/2010 but not submitting written report, KPPU shall apply administrative sanction of Rp1.000.000.000, 00 for any delay as a fine. The maximum administrative sanction is around Rp25.000.000.000, 00. In furtherance of this regulation, KPPU issued Peraturan Komisi Pengawas Persaingan Usaha No.13 /2010. KPPU (based on Article 29, Article 5 and Article 10 Government Regulation No. 57/2010) issued two (2) forms of evaluation that is: post-evaluation (notification) dan pre-evaluation (notification). Consultation was through written or verbal (Competition Commission Regulation, 2010).

The total value of sales and/or total asset accumulated from the merger or liquidation is calculated based on audited sum of latest annual sale's value and or asset plus sales value from the entire legal entities controlled by the merger companies. So, the asset value will cover up to the sale assets of vertical companies that is the mother company till and the child or sister companies. Asset value will be calculated based on the asset located in Indonesia and not included internal or external export outside Indonesia. Even if the merger between affiliated companies but nonetheless not changing the market structure and existing market competition will not be considered as merger. This is to include merger between state own companies or companies which shares controlled by the state (2010, Competition Commission Regulation).

KPPU's decision No. 07/KPPU-L/2007 on Temasek (Singapore State Own Company) and Supreme Court Decision No. 496 K/Pdt.Sus/2008 on 10 September 2008 further affirms the merger control and government who own company shares is not a business actor (2010, Competition Commission Regulation). KPPU Guidelines also regulates control over merger outside Indonesia but must be proved to have affected Indonesian domestic market.

KPPU had initially notified Grab to submit mandatory merger notification on the basis that it's accumulated value which exceeded the minimal requirement and merged asset of accumulated sales. Grab Indonesia responded to KPPU's call for notification on 3 April 2018, by stating that the transaction is solely corporate action on asset acquirement and there is no change on control in Uber Indonesia. Grab Indonesia further argued that Uber Indonesia does not have an office or legal entity or special entity in East Asia. Therefore the asset acquired by Grab does not include their information technology and intellectual property rights which still owned by Uber Indonesia who may be considered to remain as an active corporation on its own. So on its post-acquisition status, Uber Indonesia is considered as an minority shareholder in Grab Holding.

KPPU on the basis of Grab, Indonesia explanation decided that the transaction is solely and purely are asset acquisition as corporate action without change of control from Uber to Grab Indonesia. The transaction was determined as not a merger, because Uber Indonesia still existed as legal entity (not merged with Grab) in Indonesian perspective. As a result KPPU concluded not mandatory for Grab to report or notify KPPU on its transaction because it falls outside of Law No.5/1999 Government Regulation No. 57/2010. However, KPPU decided to actively monitor on its pricing and market competitiveness on online transportation to avoid potential price leadership or price fixing or increasing conducts because the market potentially becoming more concentrated.

It is indeed interesting to observe the different approaches taken in Indonesia compares to Malaysia and Singapore who had responded to Uber-Grab transaction as not merger or asset acquisition but more of a corporate action which may impact on market competition despite having merger control provision within their competition law regime. Indonesia's approach perhaps is influenced by their legal formality based on Civil Law country in which interpreting the substance of the law was within KPPU's priority. However, KPPU decision fails to realise the possible impact on their consumer transportation market competition and consumer welfare. Arguably, KPPU should have conducted a thorough study from their economic and legal social perspective to forecast the market competition subsequent to the merger or acquisition. An economic study is definitely required in such cases but unfortunately, KPPU is did not have Economic Division then and now. Generally most of the Competition Commission which is empowered to control merger is required to conduct economic study to anticipate future market and behaviour as consequences of the corporate actions. The decision to rule merger as anticompetitive or not relies heavily on the economic study or prediction and mandatory economic analysis. In Indonesian KPPU had simply responded without any economic evidence or analysis that Uber and Grab transaction was a corporate action therefore does not fall within its competition regulation and as a result the asset acquisition was excluded from Law No.5/1999. KPPU merely settled the case by alternatively agreeing to observe and monitor whether their assets acquisition would create barrier to entry or lessening competition without any concern for the E Hailing consumer welfare.

However, KPPU as the enforcement authority failed to conduct any market study to evaluate its impact and anti-competitive damages on the Indonesian transport industry. Although anti-competitive merger cases are largely dependent on the future performance or behaviour, an unmonitored merger, could potentially decrease the number of the competition enterprises and facilitate the remaining enterprises to coordinate their behaviour in terms of price, quantity or quality similar to a cartel-type arrangement especially in markets for homogeneous products. On the same note, any anti-competitive agreement with a flavour to evade CL by way of merger, is equally should be absolutely forbidden. (Dhall, V, 2008)). Perhaps KPPU should have played a pro-active part in digital merger cases because it is better to prevent the possibility for abuse of market power rather than to control the exercise of the market power after the merger has taken place. This is also, because the social and economic cost of de-merging is very heavy, involves tedious process and tough option for competition authorities.

Impact and Challenges of Uber-Grab merger in Thailand

Thailand's competition law finally came to be re published in the Royal Gazette on 7 July 2017 and to become effective on 5 October 2017. The 2017 Act retains the principle in the 1999 Act by reaffirming that being a market dominant player does not automatically result in breach of the competition law. Instead, in order to constitute an abuse of dominance, it is necessary to consider whether the market dominant player is acting in any of the manners stipulated. (Section 50, 2017 Act). The law imposed new requirements for pre-merger and post-merger requirement under the 2017 Act (in Sections 51-53). Post-merger notification required for business operator who engages in a business merger that may cause significant decrease of competition in a particular market pursuant to the criteria prescribed in the notifications of the Commission shall notify the result of the merger to the Commission within 7 days from the date of merger. Pre-merger permission required for approval from the Commission for a merger of businesses which may result in monopoly or a business operator with market dominance (R&T Asia Thailand, 2017August).

Uber was introduced into Thailand in 2014. GrabCar which was operated by the Grab Group also operated as GrabTaxi, similar to MyTeksi in Malaysia, which was used to book regular taxis which have signed up for the application and meet its standards Drivers using the GrabTaxi application can also take advantage of surge pricing using the Just*Grab* application (GrabTaxi, 2017).However, the legal status of *Uber* and *GrabCar* was not clear under the existing regulations governing the taxi industry in Thailand. The lack of clarity caused various friction and disputation amongst interested parties and new issue from the perspective of Thai competition law. Thailand had serious problems with their traditional taxi industry which resulted with unsatisfied clients and negative image on their service. Taxi consumers were faced with impolite taxi drivers; denial of services whilst the taxi displays a sign signifying the taxi is available for hire; assault and even drop off clients on the roadside halfway to their destination (Droidsans, 2017, 26 March)

The introduction of Uber and GrabCar resolved consumer transportation because it provided more options for their travel needs. In contrast, it created new issues when traditional taxi services accused Uber, GrabCar for providing an illegal service under the regulations. Siripha Sawsawat, the Country Manager for Uber Thailand, himself accepted that Uber's service is outside a legal framework and is seeking a resolution with Thai government.So the services of Uber in Thailand was only available in Bangkok and surrounding areas(Siripha Sawsawat,2017), (Bangkok,2017)

Generally Uber and GrabCar were operating illegally in Thailand. The taxi industry was heavily regulated whilst the sharing economy was not. For instance, the taxi industry is regulated under the Vehicle Act, B.E. 2522 (1979) as amended. Section 4 of the Act is quite clear in that a Public vehicle includes "a taxi which is employed for transporting not more than seven passengers or such vehicles other than a fixed route transport vehicle". The taxi driver must be a holder of a public vehicle driving licence (s 43) and pay vehicle taxes accordingly. Under the Land Transport Act (No. 6), B.E. 2537 (1994) taxis are no longer regulated under that Act but under the Road Traffic Act B.E. 2522 (1979) as amended, the taxi driver cannot refuse a fare (s 93), charge more than shown on the meter (s 96), drive carefully (s 99), take the shortest route and not abandon a passenger (s 100) and wear a uniform (s 101). It was unclear whether Uber and GrabCar should be regulated as a taxi under the Road Traffic Act or be regulated under the provisions of the Land Transport Act. So they were treated as private drivers under the Acts. The current uncertainty had forced the Department of Land Transport, which is responsible for taxi regulation to find a solution on issues like commercial versus private fees and charges; the vehicle inspections and driver licencing. There were also concern about the "illegal" services being offered by Uber and GrabCar which disrupted and destroying Thai transportation industry. They also experienced similar outbreaks of violence among taxi drivers and Uber drivers (Blognone (online), 29 November 2014).However in March 2017 the Government announced that "unlicensed taxi drivers to be arrested but Uber not banned.(The Nation,2017, 9 March) but by June 2017 government approved ride hailing taxi service, but their required to be registered and the government was investigating the possibility of introducing ride hailing applications within their transport system(Thai PBS (online) (2017,26 June). Uber collaborated with regulated taxis, Howa, a major local taxi operator known for its green cars, and bring the company's 4,000 taxis that operate in Bangkok onto its ride-sharing app platform (Asian Review,2017 13 Dec)

Meanwhile, Sumet Ongkittikull, the Research director for Transport and Logistics at the Thailand Development Research Institute (TDRI) had raised concern that the merger might result in 'unaffordable prices' for consumers of ride hailing services. He revealed that the TDRI's own research indicated that 15% to 20% of Thai taxi passengers are currently using the ride hailing services. TDRI wants ride hailing service to be recognised on condition

that the cars and drivers comply with the same regulations of traditional taxis on the roads. It also revealed that there are 20,000 ride hailing cars on the roads, generating around 6-7 billion baht in income. Meanwhile, traditional taxis generate 43 billion baht with 60, 00 to 70,000 cars alone in Bangkok (Thai Examiner.com, 2018,15 June).

Generally of all the Grab services available in Thailand, the only one that is illegal is Grab car, while Grab taxi, Grab express, Grab bike and Grab deliver are legal. Despite being illegal, it is estimated there are at least 2,000 Grab cars operating in Thailand at present. However In Bangkok, motorcycle taxi drivers protested outside the Grab Thailand office on May 17, 2018. They called on the company to stop the owners of motorcycles with white license plates from providing services via the Grab application (Dusita, M 2018, 2 October). Thai law is struggling to cope with the rapidly changing world, but it is essential that that it allow innovation to society. It is not only will benefit to people but also increase of people income. It makes money circular flow in the system.

Analysis and Conclusion

The present situation is Grab officials maintain the agreement is legal. Anti-competition regulations in ASEAN differ from country to country. Go-Jek is expanding, and if Grab were to raise prices, it could be an advantage for them. Despite CCCS decision, Uber has left SEA and Grab is already making gains in Southeast Asia. Malaysia doesn't have laws allowing review of proposed mergers and Thailand appears to have no record of successful enforcement actions. Furthermore, Uber's investment should help Grab continue their progress in SEA.The reality on the present situation is that the current existing regulations are not equipped to effectively protect consumers against these new digitally fast-growing ride-hailing tech giants with extensive reach and deep pockets. Although Uber and Grab argue that there is competition from new entrants like Ryde, Singapore and PT Go-Jek of Indonesia, going digital involves high capital investment in setting up the data centres and the digital infrastructures. Though promising but the possibilities to enter the concentred market is limited and going to be more difficult for new comers. Furthermore the threat of disruption is higher in digital economy, arguably can easily unseat the incumbents leading to more social-political issues. Meanwhile,

So are we headed into an economy dominated by digital tech and large firms who can own it? Is concentrated market is the new norm in the platform based market? The answer lies in the political will to change (from the conventional practice) and/or improvise the current regulatory instruments to be able to address the characters in the digital economy. In particularly, to address the gap of knowledge and control of the merger phenomena in digitalised knowledge economy consumer market. In which CL regulators, could constantly check with periodic amendments and improvements because merger control is is concerned about negative impact in future where there is possibility of the market being less competitive and more concentrated

For a start firstly, the general definitions and ways to determine the relevant market seem out-dated, does not take into account the access to data during the dominance test in the case of digital markets must be addressed. Economic assessment must be utilized to assess its dominance impact on the market. More economic tools are needed to quantify consumer benefits in market where algorithmic pricing used rather than traditional pricing method. Secondly, Merger control must be specifically addressed to scrutinize transactions in the digital space that bring about highly potential growth for one party to avoid market concentration. Every national as well as regional authority must be equipped with regulatory tools to enforce the competition prohibition rules independently. Thirdly, competition regulators play an active advocacy role to notice and notify the fallouts in the CL for merger control in the digital market economy. The case of Grab -Uber merger is just the beginning of

many more digital mergers in other industry, so it timely to address the legal gap in the system.

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RISK AND CHALLENGES OF BIG DATA ANALYTICS AND INTERNET OF THINGS ADOPTION AMONG AGROPRENEURS IN MALAYSIA

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Abstract: *Big data comes from a variety of sources, in very large amounts and often in real time settings. This trend is largely driven by the pervasive diffusion and adoption of mobile device, social media tools, and Internet of Things (IoT) enabled by radio frequency identification (RFID) and other RF-related tracking and sensor devices. When it comes to big data and IoT risk and challenges, it seems not to be an overstatement to say that big data and IoT does have strong effects on cyber-security and privacy. Qualitative data was used to draw findings for this research. Respondents from several government agencies were interviewed. Data from the interviews were transcribed and analysed. Conclusion drawn from the findings on the risk and challenges of big data analytics and IoT was made.*

Keywords: *Big Data Analytics, Internet of Things, TOE, Qualitative Analysis*

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"Computers, smart phones, GPS devices, embedded microprocessors, sensors —— all connected by the mobile Internet —— are forming a 'societal nervous system' that is generating a cloud of data about people that is growing at an exponential rate. Every time we perform a search, tweet, send an email, post a blog, comment on one, use a cell phone, shop online, update our profile on a social networking site, use a credit card, or even go to the gym, we leave behind a mountain of data, a digital footprint, that provides a treasure trove of information about our lifestyles, financial activities, health habits, social interactions, and much more."

– *Frank Moss (2011)*

Data are flooding in at rates never seen before—doubling every 18 months—as a result of greater access to customer data from public, proprietary, and purchased sources, as well as new information gathered from Web communities and newly deployed smart assets. These trends are broadly known as "big data." (Bughin, et.al., 2010).

Big data comes from a variety of sources, in very large amounts and often in real time settings. This trend is largely driven by the pervasive diffusion and adoption of mobile device, social media tools, and Internet of Things (IoT) enabled by radio frequency identification (RFID) and other RF-related tracking and sensor devices (Riggins and Wamba, 2015). When

it comes to big data and IoT risk and challenges, it seems not to be an overstatement to say that big data and IoT does have strong effects on cyber-security, privacy and data heterogeneity (Sun et al., 2016).

According to Bughin, et.al. (2010), the trend has the potential to drive a radical transformation in research, innovation, and marketing. They argued that Web-based companies, such as Amazon.com, eBay, and Google, have been early leaders, testing factors that drive performance—from where to place buttons on a Web page to the sequence of content displayed—to determine what will increase sales and user engagement. Companies selling physical products are also using big data for rigorous experimentation. The ability to marshal customer data has kept Tesco, for example, in the ranks of leading UK grocers.

There is a strong celebratory thread in the literature on big data: that more data will bring better science, safer cities, and rapid innovation. One such example is The Human Face of Big Data (Smolan & Erwitt, 2012), a collection of essays about the potential of large-scale data gathering to design personalized drugs, predict divorce, and research Parkinson's and retinal disease. The pace of technology and business change will only accelerate, and the impact of the trends above will broaden and deepen.

For some organizations, they will unlock significant competitive advantages; for others, dealing with the disruption they bring will be a major challenge. Our broad message is that organizations should incorporate an understanding of the trends into their strategic thinking to help identify new market opportunities, invent new ways of doing business, and compete with an ever-growing number of innovative rivals.

Agropreneur and agro-based sector in Malaysia

The term 'agropreneur' which represents agriculture-based entrepreneur is used by the Ministry of Agriculture and Agro-based Industry Malaysia (MOA) under Young Agropreneur Program. In 2015, the Malaysian government launched the Eleventh Malaysia Plan (EMP) for the period of 2016-2020. Within the EMP, agriculture sector, namely the agro-food and industrial commodity subsectors will be transformed and modernized into a high-income and sustainable sector. This sector is expected to grow at 3.5% per annum, contributing 7.8% to GDP in 2020 (Rozhan, 2016).

Out of seven key strategic focuses on agro-base sector, strategy 1 is to focus on improving productivity and income of farmers, fishermen, and smallholders. As highlighted by Rozhan (2016), the first move in improving the productivity is to accelerate the adoption of ICT and farming technology. Mobile phone applications and portals will be used to disseminate real-time information on market demand and prices, early detection and warning alerts on disease outbreaks as well as provide interactive platforms for technical advice.

Networking and collaboration between stakeholders via the utilization of big data and IoT specifically the social network applications is a definite advantage. It is important to understand the risks and challenges associated to big data and IoT utilization for sustainable enterprise performance. This will help in proposing the best practices in network collaboration among SMEs stakeholders in particular the agriculture base sector.

The risk and challenges of big data and internet of things

Big data, the combination of greater size and complexity of data with advance analytics (Ohm, 2011; Boyd & Crawford, 2012; Rubinsten, 2012) has been effective in improving national security, making marketing more effective, reducing credit risk, improving medial

research and facilitating urban planning (Martin, 2015). Nevertheless, it possesses risk and challenges. As suggested by Martin (2015), the risk and challenges from the utilization of big data and IoT are accuracy, biases, privacy, and rights while Sun (2015) argued that big data and IoT does have strong effects on cyber-security, privacy and data heterogeneity.

In the same study Martin (2015) suggested that in understanding challenges in big data and IoT industry, it can be seen in an information supply chain framework. The study analyzed the information supply chain via first, examining the downstream distribution which focused on customer use and issues; and second, examining the upstream sourcing of information which focused on suppliers' activities.

Following Martin (2015) information supply chain framework and looking at the scope of agropreneurs' main activities with smart gadget, as well as from the literature discussion, it is thus important to understand and investigate the risk and challenges concerning big data and IoT utilization in Malaysia's SME agro-based sector. It is imperative to also examine the way these companies execute the mitigation process in handling the risk and challenges and how it impacted the companies' strategic competitive advantage.

The Aims

This research aims at investigating the nature of big data and IoT adoption among agroproneurs in Malaysia. Specifically, the study aims to examine the risk and challenges of big data and IoT utilization among agroprenuers in Malaysia

Methodology and Initial Findings

As an initial attempt to identify the nature of risk and challenges of the technology adoption within agriculture-based SMEs, several respondents from various agencies were selected and interviewed. Two ministries namely Ministry of Energy, Science, Technology, Environment and Climate Change (MESTECC) and Ministry of Agriculture (MOA) were among the selected along with four other agencies involved with these two ministries. The other four agencies were Malaysian Agricultural Research and Development Institute (MARDI), Pertubuhan Peladang Kawasan Kuala Langat, Malaysia Communications & Multimedia Commission (MCMC), Malaysian Digital Economy Corporation (MDec), and MIMOS Berhad.

These agencies were selected for the reason of their involvement in the execution of National Internet of Things (IoT) Strategic Roadmap and National Big Data Analytics Innovation Network. Apart from the government agencies involve in the implementation of IoT and Big Data Analytics within agriculture sector, two SMEs were selected as an early attempt to approach in order to gain some insights about the sector. These two companies were suggested by MOA and MESTECC. For a preliminary conclusion, SMEs within agro-based sector in Malaysia are considered as an early adopter. Cost is considered among the biggest challenge. Next step in understanding the nature of risk and challenges in the adoption is the development of instrument following the Technology, Organizational and Environment Framework (TOE)

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FORECASTING AND MODELLING 4 MAJOR ISLAMIC GLOBAL INDEX

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Abstract: *In order to better understand the global shariah market, this study is attempt to capture market behaviour of Dow Jones Islamic Market by using econometric model, with the aim of modelling and forecast the risk. Using 10 years financial data, the 4 DJIM Index chosen for this study are DJIM Asia Pacific, DJIM Emerging Markets, DJIM Europe and DJIM Developed Market. It is then modelled by using univariate Generalized Autoregressive Conditional Heteroskedasticity (GARCH) and its extension including EGARCH, TGARCH and FIGARCH using gaussian and skewed student-t distribution. The estimation and forecast of the GARCH family model is compare to obtain the best volatility model. The market application for this study is Value-at-risk (VaR) estimation. It is heavily used in financial institutions to report on daily capital risk. Hence, this study provides comparison of the out-of-sample volatility and VaR forecast performance of the shariah market index. The volatility forecast is evaluated through loss function.*

Keywords: *volatility modelling, forecasting, Value-at-Risk, GARCH family*

Introduction

Over the past two decades, the Islamic financial markets have developed to become an increasingly important component of the international financial system. Today, there are more than 600 Islamic financial institutions that operate in more than 75 countries. The total assets of the Islamic finance market have grown from US$150 billion in the mid-1990s to approximately US$190 trillion as at the first half of 2018. The Islamic Financial Services Industry (IFSI) stability report provide assessment of the key development in global Islamic market. The report for the year 2018 stated that the performance has surpassed the USD 2 trillion mark as the end of 2017. This shows that the Islamic market is slowly growing into a key component in the international financial market according to IFSB-ADB. (2018). Researcher KR and Fu (2014) and Abbes (2012) show that the shariah market tend to perform better compare to its counterpart during financial crisis.

For any kind of market whether its Islamic or the conventional market, volatility plays a vital role in risk management (Value-at-risk), investment and securities evaluation. Volatility is the fluctuation of the asset price. High volatility means increase fluctuation in returns thus higher risk. Therefore, prediction of volatility needs to be as accurate as possible. The study of volatility has always been a field of interest for many academic researchers and financial institutions. With an adequate volatility model estimation and conditional distributional assumption, an appropriate VaR model is able to help investors to make good investment decisions.

This paper is organised as follows. Section 2 of this paper presents the literature review Section 3 describes the data, preliminary analysis and the model approach. Section 4 presents the empirical results and forecast evaluation. The final section is the conclusion.

Literature Review

Since conventional market and Islamic market tend to be similar, research have been done to find the relationship between the two market in terms of returns and risk. They have also analysed the performance of the two market before, during and after financial crisis. Since the shariah market is free from interest, gambling and uncertainty, researcher Dewi and Ferdia (2009) and Badreldin (2009) argue that is much safer than the conventional market thus able to solve the financial crisis problem. Researcher Forte and Miglietta (2007) who first examine the performance of islamic mutual fund and the conventional mutual fund, found out that the Islamic mutual funds perform better than the conventional mutual funds. The only main difference between the two funds is the that Islamic funds does not invest in interest bearing funds. Furthermore, research Hayat and Kraeussl (2011) shows the performance of Islamic equity fund underperform before the financial crisis but perform better during the financial crisis comparing to the traditional equity fund. The implication of these studies shows that investor can diversify their investment not only in tadeonal market but also in Islamic market. Therefore, the study of volatility in Islamic market should also have equal emphasis. The study of volatility began as early as the 90's. Since then, there is numerous empirical studies done on the GARCH family models. Most of these studies (Hansen & Lunde, 2006; Alam, Siddikee & Masukujjaman, 2013; Fan, Wang & Wu, 2017) are focus on conventional markets. However, there is still lack of research (KR & Fu, 2014; Abbes, 2012) done on shariah market. In an effort to find the most suitable risk models that best capture the dynamic volatility of an asset return, the autoregressive conditional heteroscedasticity (ARCH) model by Engle (1982) has prompted numerous studies on conditional volatility modelling. It was later that the ARCH model was generalised by Bollerslev (1986) into GARCH model and several extensions were made to capture other stylised facts. In an attempt to improve the GARCH framework, researchers proposed various extension and specification that can range from the simplest form such as the EGARCH (Nelson, 1991) to a very complicated functional form such as Fractionally Integrated Exponential FIGARCH (Baillie, Bollerslev & Mikkelsen, 1996). The advantage of FIGARCH model is that it is able to capture the persistent autocorrelation in conditional variance. Glosten et al. (1993) suggested threshold GARCH or TGARCH (p, q). The advantage of EGARCH model is that it is able to capture volatility clustering and asymmetric effects.

Despite the effort, the GARCH model still fall short in its forecast performance against the daily square returns (Andersen, Bollerslev & Ebens, 2001; Barndorff-Nielsen & Shephard, 2002). The volatility models show inconsistency when using different loss functions. The reason behind it is that daily squared returns tend to be conditional unbiased, but it is a noisy estimator that could lead to misleading results. Thus, the problem of choosing the best volatility model is yet unsolved with current statistical tools.

As early as 1970s, most early empirical studies assumed that returns are gaussian. Even though it is widely used, it fails to capture the leptokurtosis (heavy tail) and skewness (asymmetry of the asset return). Therefore, researchers have suggested alternative distribution to account for this weakness. One of the distributions that is able to capture both of the mentioned attributes is the skewed student-t (Fernández & Steel, 1998). In evaluating the performance of models, previous studies apply different evaluation measures. The most widely applied measures include Mean Square Error (MSE), Root Mean Square Error (RMSE), and Mean Absolute Percent Error (MAPE). In practice, when comparing the different models, it is not the case where one risk evaluation measure dominates the others.

The idea is to take the average figure of the statistical measure, based on the parameter obtained, then compare it with the forecast models.

Generally different empirical studies have different opinions in choosing the suitability of models. To generate the best VaR forecast, studies by Degiannakis (2014) and So & Yu (2006) suggest that flexibility in models is important while others (Bams, Lehnert & Wolff, 2005) argue that simpler model is preferable as complex models tends to overestimate the results making it bias. While some debate on model suitability, others (Giot & Laurent, 2004) question whether complexity of the model is able to add value to the market risk modelling. Before drawing the final conclusion, more studies could be done to improve the current methodologies.

Methodology

Data Description

In this study, 4 Dow Jones Islamic indices are chosen. They are the DJIM Asia Pacific, DJIM Emerging Markets, DJIM Europe and DJIM Developed Market. The duration for all the index is 10 trading years starting from July 1, 2008 excluding weekends. The sample has been taken from ICE Data Service. The sample is then separate into two parts. The first part which is the in-sample while the second part is the out-sample. OxMetrics (Laurent, 2009) is used to obtain the empirical analysis. In order to make the time series stationary, first-order logarithm differencing is used on two consecutive closing day price to calculate the returns. It is then converted into percentage. It can be expressed as the following equation:

$$R_t = 100\ln(\frac{P_t}{P_{t-1}}) = 100(\ln P_t - \ln P_{t-1}) \quad (1)$$

P_t = index closing price at time t
P_{t-1} = index closing price prior to time 1
R_t = rate of return at time t

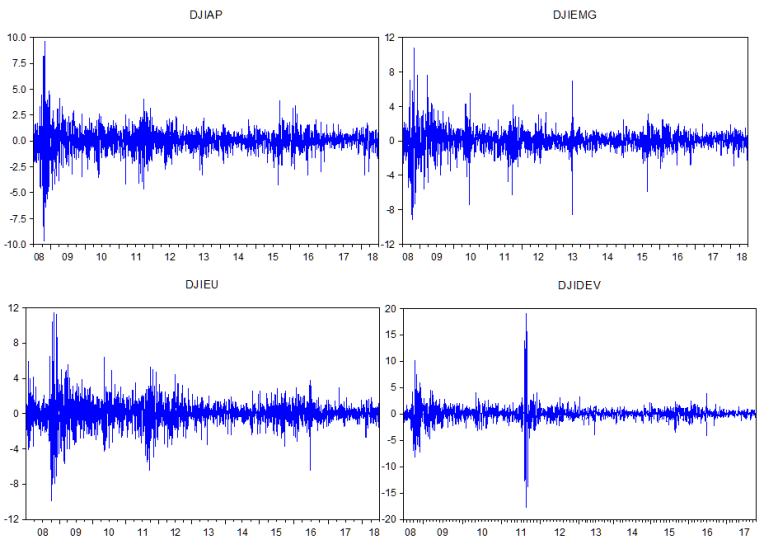

Figure 1: Time series log daily returns for DJIAP, DJIEMG, DJIEU and DJIDEV

From figure 1, all four indices exhibit several abnormal high peaks and low points. This is consistent with the characteristic, volatility clustering in financial time series. These volatility clustering can be seen during the year 2008 and 2011 in all the index. However, it is relatively calm in DJIEU compare to the other 3 indexes. The volatility clustering in these

series indicating that that high volatility tends to follow high volatility and low volatility tends to follow by low volatility.

Table 1: Descriptive statistics for log daily return series of DJIAP, DJIEU, DJIEMG, DJIDEV

Statistics	DJIAP	DJIEU	DJIEMG	DJIDEV
	Daily Log Return Distribution			
Observation	2559	2684	2559	2372
Mean	0.014524	0.005167	0.002631	0.019588
Standard Deviation	1.12683	1.253866	1.424805	1.463425
Skewness	-0.56086	-0.510425	0.006618	-0.333894
Kurtosis	12.71518	14.06349	11.69478	52.83621
Jacque-Bera	10197.94	13162.11	8454.532	235160.8
probability	0.000000	0.000000	0.000000	0.000000

From the table descriptive results, it shows that the DJIAP, DJIEU and DJIEV have asymmetric distribution that skewed to the left. This indicates that the 3 index has a fat-tail distribution. Whereas the DJIEMG has a skewness of 0.006619 which is close to gaussian. For the kurtosis, all series have very high kurtosis that exceed the kurtosis of a gaussian distribution. As for the Jacque-bera test, the p-value for all the series have a value close to 0. This implicates that the series in not normally distributed at the confidence interval of 99%.

Preliminary Test

Stationary Test

Before estimating the volatility model, it is important to ensure that the series is stationary to avoid biasness in interpreting the result. To test for stationary, Augmented Dickey- Fuller test is used. Under the null hypothesis, there is a unit root for the series. The alternative hypothesis is there is no unit root in the series.

Table 2: ADF test for log daily return series of DJIAP, DJIEU, DJIEMG, DJIDEV

	DJIAP		DJIEU		DJIEMG		DJIDEV	
	t-stat	Prob.*	t-stat	Prob.*	t-stat	Prob.*	t-stat	Prob.*
Augmented Dickey-Fuller test statistic	-48.36401	0.0001	-39.07008	0.0000	-43.3291	0.0000	-28.57828	0.0000

At 1% significance level, the ADF test statistic for each index is -48.36401, -39.07008, -43.3291 and -28.57828 respectively with all of the series less than the critical value. Thus, the null hypothesis is rejected indicating that the series is stationary. This result supports the research by Ender (2010) stating that the index price tends to be non-stationary while the return is stationary.

Autocorrelation Test

To test for serial correlation, Ljung-Box Q statistics test is used. The null hypothesis for the test is that there is no autocorrelation with p lag orders. The alternative hypothesis is there is autocorrelation in p lag orders.

Table 2: L-jung Box test for log daily return series of DJIAP, DJIEU, DJIEMG, DJIDEV

	Q (5)	Prob.	Q (10)	Prob
DJIAP	12.007	0.035	27.598	0.002
DJIEU	26.740	0.000	34.939	0.000
DJIEMG	78.459	0.000	90.094	0.000
DJIDEV	137.37	0.000	183.57	0.000

From the Ljung test, all the p-value for all the series are less than 0.05. thus, the null hypothesis is rejected, indicating that there is serial correlation in the log daily return series for all the series.

ARCH Test

In order for series to qualify in using the GARCH family model, the series must have ARCH effect. The null hypothesis for the test is there is no ARCH effect. The alternative for hypothesis is there is ARCH effect.

Table 3: ARCH test for log daily return series of DJIAP, DJIEU, DJIEMG, DJIDEV

	DJIAP	DJIEU	DJIEMG	DJIDEV
Obs*R-squared	66.58741	91.44557	162.3038	115.0413
Prob. Chi-Square	0.0000	0.0000	0.0000	0.0000

From the ARCH test, all the p-value for the series is close to 0. Thus, the null hypothesis is rejected, indicating that there is an ARCH effect. The series is qualified to use GARCH family model to estimate the volatility.

Specification of Volatility Model

GARCH Model

Bollerslev (1986) proposed the generalisation of ARCH that allow past conditional variance to be included as a function in the current conditional variance. The functional form of GARCH (p, q) is denoted as:

$$\sigma_t^2 = \alpha_0 + \sum_{i=1}^{q}(\alpha_i \varepsilon_{t-i}^2) + \sum_{j=1}^{p}(b_j \sigma_{t-j}^2), \quad (2)$$

EGARCH Model

Nelsen (1991) suggested exponential GARCH or EGARCH (p, q). The advantage of EGARCH model is that it is able to capture volatility clustering, asymmetric effects and long memory. In other words, it is able to capture the long-range dependency of a volatility. The functional form can be denoted as:

$$\log \sigma_t^2 = w_0 + \sum_{i=1}^{q} \alpha_i(\phi z_{t-i} + \psi(|z_{t-i}| - E|z_{t-i}|) + \sum_{j=1}^{p}(b_j \sigma_{t-j}^2), \quad (3)$$

TGARCH Model

Glosten et al. (1993) suggested threshold GARCH or TGARCH (p, q). The advantage of EGARCH model is that it is able to capture volatility clustering and asymmetric effects. The functional form can be denoted as:

$$\sigma_t^2 = \alpha_0 + \sum_{i=1}^{q} \alpha_i(\alpha_i + \gamma_i d_{t-i})\varepsilon_{t-i}^2 + \sum_{j=1}^{p}(b_j \sigma_{t-j}^2), \quad (4)$$

FIGARCH Model

Baillie et al. (1996) introduced fractional integrated GARCH or FIGARCH (p, d, q). The advantage of FIGARCH model is that it is able to capture the persistent autocorrelation in conditional variance. In other words, it is able to capture the long-range dependency of a volatility. The functional form can be denoted as:

$$\sigma_t^2 = \alpha_0 + (1 - B(L) - \Phi(L)(1-L)^d)\varepsilon_t^2 + B(L)\sigma_t^2, \quad (5)$$

Model Evaluation Measure

In order to decide the best performing volatility model in the in-sample and out-sample time series data, statistical measure is used. The statistical measure used in this study are root mean square error (RMSE) and mean absolute percentage error (MAPE).

VaR Measure

In this study, returns are expressed in percentage. Over a given time horizon, Value-at Risk (VaR) is the return percentage loss of a trading position in that time line. The VaR performance for short position and other levels are excluded and only long position will be considered. All models are tested with a VaR level α which ranges from 5% to 0.25% and their performance is then assessed by computing the failure rate for the returns. In this study, the forecast framework is based on the best performing volatility model. It is tested using Kupiec test.

Empirical Results

In Sample Analysis

The models are estimated using 8 financial trading years while the remaining 2 years is used on the out-sample analysis. 4 risk model is estimated each with two different distributional assumption respectively. The two distributional assumption used is the gaussian distribution and skewed student-t. A total of 8 volatility model is estimated in this study. In addition to the information criterion, a correct specify model should have a fitted the standardized residual. The specify model standardised residual should not display any conditional heteroskedastic and autocorrelation. This procedure is similar to the pre-analysis of the data. From the results, all the series for the specify model achieve this requirement except for DJIEMG. There is still ARCH effect in the model specify for DJIEMG. This is because among the 4 series, the DJIEMG consist the most volatility clustering with one of the highest peaks. Therefore, it is inevitable that this series may contain outliers. This could be remedy by including the first order AR parameter conditional mean and removing the outliers.

The volatility is rank based on Aikaike information criterion (AIC). For all the series, the best model fit is EGARCH with skewed student t whereas the worst volatility model fit is the GARCH (1,1) with gaussian distribution. Even though the values do not vary among the same distribution but it highly varies when compare to other distribution. This indicates that the series favours asymmetric model with skewed student-t as compared to symmetric GARCH model.

Table 4: Overall model fitness measure

Model/Information Criterion (AIC)	DJIAP	Rank	DJIDEV	Rank	DJIEMG	Rank	DJIEU	Rank
GARCH(nor)	2.8053	7	2.8639	8	2.951583	8	3.29711	8
TGARCH(nor)	2.7809	6	2.8334	5	2.925307	6	3.265071	6
FIGARCH(nor)	2.8059	8	2.8621	7	2.951208	7	3.291479	7
EGARCH(nor)	2.7772	5	2.8424	6	2.916363	5	3.256249	5
GARCH(skew-t)	2.7771	4	2.7592	4	2.892244	3	3.266557	4
TGARCH(skew-t)	2.7566	2	2.7222	2	2.871926	2	3.234114	2
FIGARCH(skew-t)	2.7742	3	2.7495	3	2.890145	4	3.261005	3
EGARCH(skew-t)	**2.7345**	**1**	**2.7117**	**1**	**2.861878**	**1**	**3.226485**	**1**

Out Sample Forecasting Results

In this section, the out of sample is performed for 1 month ahead, generating 20 forecast observations. Table 5 shows the forecast performance for all the specify models with both gaussian and skewed student t distribution and its ranking.

Table 5: Overall Forecast Performance Error Measure

Dow Jones Islamic Index	DJIAP		DJIDEV		DJIEMG		DJIEU	
Error Measure	RMSE	MAPE	RMSE	MAPE	RMSE	MAPE	RMSE	MAPE
GARCH(nor)	0.6503	100.6	1.381	416.3	0.4537	55.29	1.297	35.99
TGARCH(nor)	0.6387	101.1	1.497	514.5	0.4291	52.75	1.519	41.64
FIGARCH(nor)	0.6662	99.01	1.351	401.2	0.4348	50.93	1.106	31.09
EGARCH(nor)	**0.6098**	**80.16**	1.599	576.6	0.3982	47.24	1.039	29.43
GARCH(skew-t)	0.6417	98.78	1.345	373.6	0.4524	55.84	1.352	37.33
TGARCH(skew-t)	0.6654	104	1.792	577.4	0.4612	57.26	1.578	42.49
FIGARCH(skew-t)	0.6514	96.22	1.358	355.9	0.4366	51.14	1.085	30.6
EGARCH(skew-t)	0.6502	101.1	**1.162**	**421.2**	**0.343**	**36.58**	**0.7998**	**23.12**

From the forecast performance, the overall best forecasting model is EGARCH with skewed student-t distribution. It has the lowest loss function compare to the other model specification. Whereas the worst performing model is TGARCH with skewed student-t distribution. However, for the DJIAP index, EGARCH with normal distributions tends to perform better. In most cases, the EGARCH tend to be a better performing model given in both distributions. From the descriptive statistic table, DJIDEV shows a very high kurtosis. Thus, it is no surprise that it has a relative high loss function. In summary, all the series have a kurtosis relatively higher than the gaussian distribution. The assumed condition error distribution likewise has these attributes. Staying with the skewed student-t distribution generally lead to a better result.

VaR Forecast Evaluation

Since the EGARCH with skewed student-t distribution is the best fitted and performing model. It is used as VaR model. Table 6 and 7 present the value-at-risk in and out-sample for 1 day ahead with 95% confidence interval.

	Short Position		Long Position	
	Success Rate	Prob	Failure Rate	Prob
DJIAP	0.94755	6.12E-01	0.052453	0.61232
DJIDEV	0.96783	0.00023776	0.056998	0.18572
DJIEMG	0.9524	0.61397	0.051481	0.75886
DJIEU	0.94872	0.78423	0.054945	0.29628

Table 6: In-sample one day ahead Value-at-Risk with 95% confidence Interval

	Short Position		Long Position	
	Success Rate	Prob	Failure Rate	Prob
DJIAP	0.95385	6.84E-01	0.051923	0.84147
DJIDEV	0.96743	4.90E-05	0.054577	0.32356
DJIEMG	0.95506	0.23239	0.053146	0.46963
DJIEU	0.95077	0.92812	0.041538	0.3085

Table 7: Out-sample one day ahead Value-at-Risk with 95% confidence Interval

From the Kupiec test, the VaR forecast gives a somewhat satisfactory result with only few exceptions. The short position success rate for both DJIAP and DJIDEV index fails the test. The null hypothesis of correct unconditional coverage is rejected for 95% confidence

level. Whereas for DJIEMG and DJIEU, both short and long position are better for 95% level of confidence. In other words, the EGARCH with skewed student-t distribution gives correct VaR estimates for DJIEMG and DJIEU. This mean that the actual number of exceedances is approximately close to the expected number. However, it overestimates the VaR forecast in DJIAP and DJIEV short position.

Conclusion

A comparative analysis of 4 major Shariah Index Market is conducted in evaluating the volatility model and forecasting performance of the family GARCH model. These models include vanilla GARCH, TGARCH, EGARCH and FIGARCH. From the in-sample analysis, the best fitting modelling is EGARCH with skewed student-t distribution while the worst the gaussian GARCH model is the worst. This shows that asymmetric model is still a better fit than a symmetric GARCH model. The forecast performance is evaluated through MSE and RMSE. The GARCH with skewed student-t distribution once again perform better than its contemporaries. For both the in-sample and out-sample VaR forecast, the Dow Jones Islamic Index perform adequately with a couple of non-satisfactory results. Overall, this study shows a parsimony model such as the EGARCH with skewed student-t variant is able to outperform common GARCH family model in modelling and forecasting the daily volatility shariah market index.

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ENTREPRENEURIAL MOTIVATION OF HOMEMADE CAKE ENTREPRENEUR: A CASE STUDY IN NFORMAL SECTOR

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Abstract: *Entrepreneurs and entrepreneurial activity represent a major source of innovation and economic strength for many countries, in both formal and informal sector. Even though most governments have made it easier for anyone to formally register their business and operate in the formal sector, many entrepreneurs have opted to remain in the marginal area of conducting informal entrepreneurial activities without a specified product/service, actual premise, or a trading license. Hence, the researchers are interested to ask the question; what motivates a person to conduct informal entrepreneurial activities? Is it really based on "necessity driven" and/or "opportunity driven" factors as suggested by past studies? Or are there other driving forces tied to market conditions or cultural values that are unique to an area? Hence, a case study was conducted with the aim of analyzing real- world experiences of the entrepreneur, with the general aim to understand how personal motivation, characteristics and the conditions of the environment influence business decisions. We adopt a single case study and qualitative design approach of which in-depth interviews and participant-observation were conducted of homemade cake entrepreneur operating in the informal sectors. Our findings reveal that, the entrepreneur was influenced by the available entrepreneurial opportunity (pull factor) rather than the necessity (push factor). This study is significant as it contributes to the understanding of the entrepreneurial motivation towards informal sector's activity based on a single case, which may become future reference for other entrepreneurs. However, since it focuses on single case, therefore the finding is not for generalization. Thus, further empirical study in a larger context may be performed quantitatively, and several case study approaches may also be adopted to get wider views in understanding entrepreneurial motivation in the informal sector context. This study contributes to the understanding of the entrepreneurial motivation towards informal sector's activity.*

Keywords: *informal sector, entrepreneurial motivation*

Introduction

Entrepreneurs and entrepreneurial activity represent a major source of innovation and economic strength for many countries, in both the formal and informal sector. Growth of small-medium enterprises stimulates job creation, whereas innovation can lead to the creation of better products and services. Studies in entrepreneurship suggest that the ability to recognize and exploit opportunities brought about by changes in the market involves a complex process made up of the entrepreneur's characteristics, knowledge and experience (Park, 2005; Lambing & Kuehl, 2007). Shane and Venkataraman (2000, p.218) referred entrepreneurship to the process by which ''opportunities to create future goods and services are discovered, evaluated, and exploited''. Scarborough (2012) defined entrepreneurship is

about creating something new in an uncertain environment and for the profit. Entrepreneur is English word that originally come from the French verb entreprende; that means literally, to "undertake" German equivalent, unternehmer, closely translates to owner-manager (Drucker, 1985). According to Kuratko and Audretsch (2009, p.4), defined entrepreneurs serve as agents of change; provide creative, innovative ideas for business enterprises; and help businesses grow and become profitable.

In terms of opportunities, informal entrepreneurship provides huge opportunities for anyone looking to tryout their skills in starting and managing a small business. Even though most governments have made it easier for anyone to formally register their business and operate in the formal sector, many entrepreneurs have opted to remain in the marginal area of conducting informal entrepreneurial activities (without a specified product/service or actual premise) through a registered trading license. Informal entrepreneurial activity can be described as a stepping stone towards the creation of a structured business in the formal economy. These would include economic activities that produce legal goods and services but may not be operating formally in a structured manner or may violate some (non-criminal) rules and regulations (Castells & Ports, 1989; Adele *et al*, 2015) such as non-recorded incomes and even the occasional use of batter trade. Mapp and Moore (2015) highlighted that activities of individuals operating in the informal sector are indeed not illegal and it is their decision not to formalize the business. Alatas and Newhouse (2010), further argued about the informal sector may provide flexible employment for women who want to work close to home.

According to Department of Statistics Malaysia (DOSM, 2017), 1.36 million employed persons in the informal sector comprising 9.4 per cent share of the total employment in Malaysia which actively involved in non-agricultural sector. Therefore, it is important to understand the motivations behind entrepreneurs' choice to run their business in this way, as it may help the relevant institutions to cater to the needs of this group of informal entrepreneurs as well as to ensure their integration into the formal sector.

Literature Review

Entrepreneurial Motivation

The concept of motivation can be viewed as a reason or trigger toward a person's action. Many studies have found that no single motivating factor can be attributed to venture success; but rather, it is the interaction of both internal and external factors of motivation that influences the actions of the entrepreneurs (Carter *et al*., 2003; Baum & Locke, 2004). This study involved the analysis of the entrepreneur on the individual level of analysis. Studies on this level have found that entrepreneurs can be inclined to start a business venture by both psychological and non-psychological factors (Shane 2003; Shane &Venkataraman 2000); but most studies accept that external or situational components (pull and push factors) act as more critical motivators for business start-ups (Gilad & Levine, 1986; Watson *et al.*, 1998). Latham and Pinder (2005) suggested that motivation is a psychological process that results from individuals' dealings with their environment. Research by Park (2005) highlights that entrepreneur's use their prior work experience as a frame of reference that allows them to respond to and find opportunities in their surrounding environment. The love of work is also closely related to the entrepreneurs' ability to identify and take advantage of opportunities in the environment (Park, 2005). Similarly, Baum & Locke (2004) mentions that 'passion for work' or love of one's work acts as a strong motivator for entrepreneurs as well as helps guide their actions in facing uncertainties in the environment.

The push-pull approach aims to categorizes entrepreneurs according to their business motivation (Shapero & Sokol, 1982; Feeser & Dugan, 1989; Amit & Muller, 1995). As for push and pull factors of motivation, push factors refer to external negative conditions that

force individual to engage in self-employment or entrepreneurship because all other options for work are absent or unsatisfactory, whilst pull factors refer to opportunities that pulled entrepreneurs into this endeavour out of choice to exploit some business opportunity (Kirkwood, 2009; Aidis *et al.*, 2007; Maritz, 2004; Orhan & Schott, 2001). Moreover, the pull factor of motivation portrays the opportunity entrepreneurs which referring to those who start a business to pursue an opportunity while necessity entrepreneurship or push to involve in business is more requirement-based and the best option available in the absence of employment opportunities (Reynolds *et al.*, 2005). For example, the push factor into self-employment mainly due to unemployment, job loss and lack of work opportunities (Sharafizad & Coetzer, 2016). Nevertheless, pull factors, for instance the desire to be one's own boss, increase wealth, change lifestyle or use one's experience, knowledge, and desire for independence also work autonomy can attract an individual to entrepreneurship (Kautonen, 2008; Birley &Westhead, 1994; Burke *et al.*, 2002; Amit & Muller, 1995; Gilad & Levine, 1986).

Therefore, our central research question is what motivates a person to conduct informal entrepreneurial activities? Is it really based on "necessity driven" and/or "opportunity driven" factors as suggested by past studies? Or are there other driving forces tied to market conditions or cultural values that are unique to an area? The paper is organized as follows. The next section gives a qualitative approach, presents methodology and data from a single case of the homemade cake entrepreneur. Next, presents the case study and the case analysis of entrepreneurial motivation for one informal entrepreneur. Finally, conclusion puts forward suggestions for local authority and researchers, and presents some limitations of the study.

Methodology

Our primary objective was to understand the motivations behind an entrepreneurs' choice to conduct their businesses informally. Based on this, our research strategy was to analyse real life cases of entrepreneurs engaged in only informal business based on the criteria that he/she is producing and/or selling legal goods and services (economic activity) but may not be operating formally in a structured manner or may violate some (non-criminal) rules and regulations. This particular single case study looks at the personal motivations of an entrepreneur to conduct unstructured informal entrepreneurial activities from home, without a business premise; as well as identifying issues faced by the entrepreneur. Using an information-oriented selection technique, (where cases are chosen based on specific characteristics that represented informal entrepreneurs) we chose this entrepreneur because she did not have any formal brand name, nor did she have a specific set of products (always changing), and she did not have a specific/stable premise of business. She was also chosen to as a representative unit of analysis for that geographical area. Finally, the decision to choose this entrepreneur was heavily based on accessibility to collect data through participation-observation of her business.

Using a case study approach and qualitative design (Yin, 2003), this study was conducted via in-depth interviews and participation-observation to identify and assess motivation factors as supported entrepreneurial motivation theories. Hence, through conducting case studies, we aim to discovery and compile factors of motivation and entrepreneurial practices from each case, to find similarities and differences across cases.

Case study: About the Entrepreneur

Mrs. Sarinah Sidup, 52 years old, is married and a mother of two. She has been doing business, specifically selling cakes, for almost 11 years. She started with selling various cakes (e.g. *kek lapis, kuih raya, kek coklat*) during the holidays, usually due to orders made by

friends. But Mrs, Sarinah did not only sell one type of cakes. She always changes the type of products she sells. She now also sells *bahulu*, a traditional snack or mini cakes, as well as layered-cakes (*kek lapis*) on order basis. Most orders are made using social media. Her daughter, sisters and nieces help promote her cakes on the internet, through Instagram and facebook and whatsapp.

She personally loves baking, especially *kek lapis.* Most of her daughter's friends and husband's friends really liked her cakes and asked if they can order from her. That was how the business started. She started selling *bahulu* about 3 years ago. This also started from her personal interests, as she found recipes to try baking these types of cakes because she liked eating them. She began selling *bahulu* when friends and family started ordering it in bulk, also during the holidays. For example, for Chinese New Year or weddings.

She has only one oven and she can make as many as 100 packs *bahulu* a day, by herself; as she has no workers, or no one helping her bake and pack the products. Her family only helps her promote the product online and deliver it to the customers. Her income is not set. Sometimes she can make as much as RM8, 000 for 3 weeks' worth of baking, selling *kek lapis* and *bahulu* for Raya Aidilfitri holidays; but her income is solely based on the orders made.

She does not sell her products under any specific brand, but her daughter has a trading license. She only stated general name for her cakes such bahulu on the packaging. Moreover, she still uses the transparent plastic bag for her bahulu packaging as mostly used by other informal entrepreneurs (as illustrated below).

Figure 1: Bahulu packaging

Case Analysis

Mrs. Sarinah displays a strong level of innovativeness and adaptability to her surroundings. Specifically, in this case, she used all the skills she has in cooking and her contacts (family & friends) in creating and adapting recipes to suit the needs of her customers. Mrs. Sarinah's way of presenting her products and way of packing and selling to suit her customers' needs is innovative because it involved the creation of new cake designs; of which can be made-to-order. And her decision to sell *kuih lapis* and *bahulu* was based on her knowledge, skills and personal interest in the field of baking.

When asked if she found it tiring to do all the baking and packing by herself, she replied with a smile: "I do not feel tired because I enjoy baking. I enjoy trying new recipes and making all these different types of cakes. It's fun."

Mrs. Sarinah's passion for baking and her ability to create new products through personal effort (trying out new recipes) can be categorized as a 'pull factor', because her passion pulled her into starting a business. Therefore, this analysis as most studies have supported the idea that entrepreneurial characteristics allows an entrepreneur to obtain and

use the necessary knowledge to create or exploit opportunities, hence pulling them into business endeavors.

Conclusions

We believe this case study has made some contribution toward the understanding of the entrepreneurial motivation towards informal sector's activity based on a single case, which may become a future reference for other entrepreneurs and researchers. Most studies about entrepreneurial motivation in informal sector trigger by push factors (necessity driven) especially in developing countries. But our study has revealed that pull factor (opportunity driven) as a main motivation to start a business. Therefore, the entrepreneur is someone that possesses the unique qualities that allows him or her to adapt and identify opportunities created by the changes in the environment. However, since it focuses on a single case, therefore the finding is not for generalization. Thus, a further empirical study in a larger context may be performed quantitatively, and several case study approaches may also be adopted to get wider views in understanding entrepreneurial motivation in the informal sector context. Nonetheless, for the benefit of the policy maker, this case study may present some insight about the entrepreneurial activity among informal entrepreneur in informal sectors. Also, the policy might encourage informal entrepreneurs to turn the business into a formal form of business.

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PROVOCATIVE PROMOTION: NAELOFAR HIJAB'S VIOLATING CULTURAL SENSITIVITY?

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Abstract: *The implementation of a marketing strategy without cultural sensitivity in mind can result in unintentionally offending or alienating the new target market in the fashion industry, which can lead to a drop in sales – or worse. The purpose of this paper is to explore how cultural sensitivity can cause a misfit in marketing strategy for fashion industry's specific market. In order to reach the paper aim, the study adopted the 7's marketing mixed into an inductive single-case study. The analysis focuses on Naelofar Hijab of NH Prima International Sdn Bhd, provocative promotion. It could be more advantages for a marketer to be able to fully utilize intrinsic and extrinsic strengths while avoiding the market predecessor threat; simultaneously utilize available opportunities and liberalize weaknesses despite putting too much effort to eradicate. The findings show the core strategy in promotion fashion industry via social media, adding with popularity engagement, Outfit-Of-The-Day (OOTD) approach, and utilization of personnel status as media social active user; has established strong consumer foundations supporting the marketing strategy. As far as the adoption of a single-case study is concerned, this could create biases that can affect the final product in terms of reliability, validity and generalizing. However, Erikson (1986) stated, the general lies in the particular. Even Flyvberg (2006) argued that, the strength of a single example is underestimated in its contribution to scientific progress. In a specific and growing sub industry, this single case study is reasonable to believe that it could be considered as a representative case of companies of the time and its findings sufficiently generalizable. The finding could guide marketers towards understanding the market sensitivity, and if there is a need to modified to avoid the marketing strategy from offending the new target market.*

Keywords*: Promotion, fashion show, cultural sensitivity*

Introduction

"However you choose to define cultural sensitivity, what it comes down to is the awareness that cultural differences and similarities between people exist – without placing any judgment on whether the cultural disparity is positive or negative, better or worse, or right or wrong. This is a crucial challenge for marketers to take on when adapting their marketing strategy to suit a foreign country they wish to expand into. Implementing a marketing strategy without cultural sensitivity in mind can result in unintentionally offending or alienating your new target market, which can lead to a drop in sales – or worse."

(Henderson, 2016)

Early the years 2018, the Malaysian Muslim headscarves empire and entertainment world was bombarded with a shocking videos, pictures updated in media and social media on the controversial Neelofar's new product launching. She's a Malaysian celebrity with millions of fans. "Every time she appears on screen, her adoring fans immediately rush to buy whatever she might have chosen to wear that day – including her headscarves"(Mayberry, 2015). The launching that took place in ZOUK, a night club in Kuala Lumpur, released Neelofa's special

line of headscarves called Be Lofa shawl and Be Lofa Turban. This was her fourth collection by Naelofar Hijab.

Neelofa or Noor Neelofa Mohd Noor is a stunning 29 years old Muslim beauty queen, TV host, actress, presenter and entrepreneur with 1.4 millions followers on *Twitter*, 2.2 millions on her *Facebook*(Mayberry, 2015) and 5.5 millions on her *instagram* (Malaysiakini, 2018). She's also a savvy entrepreneur and the face of fashion firm for Naelofar Hijab, her family owed company. Besides Naelofar Hijab, of the NH Prima International Sdn Bhd. Coming from a business oriented family, it was a matter of time that Neelofa would eventually become an entrepreneur herself. As an actress, she had a passion in fashion industry. In the time, where most actresses involve in fashion, beauty and health products businesses, Neelofa set up her business with her own label. She was going through her own personal transformation and among those actresses decided to dress more modesty as a muslim women within the entertainment industry. Along with it, she decided to share her natural progression in her interest with shawls. Although, her modesty attires may not be genuine requirement of muslim attire, her fashion line was quite accepted by the market when it was launched in 2014 especially among her muslim women fans in Malaysia, Singapore, and Brunei. She was succeeded in creating a new stage of fashion lines especially among her young and active ladies fans crossing the nation's borders.

News runs faster via social media.

On 26th February, 2018, Neelofa could never be more proud than receiving news about her new launched products the *Be Lofa Shawl and Turban* line was completely sold out in less than 24 hours since its release. It was a great night for a young and competitive market's entrepreneur who was recently listed among the 300 honourees of the Forbes 30, Under 30 Asia 2017 - under the Retail and E-commerce category award. The night was a proof, that her team and her idea in organizing the fashion show for muslim apparel was a success. She brought muslimah fashion to another level, which also support her idea in supporting muslim women freedom of ideas. On February, 27th, "a video, which is currently making rounds on social media" attracted approximately 963,000 views, 10,000 reactions, and 8,300 comments with 7,000 shares on *Facebook*. The video "shows a few ladies donned in hijab dancing in a night club with Naelofar Hijab's logo in a background," claimed Karissa Lund, a blogger at juiceonline.com. It was not even half day after the launched on the previous night. The backlash started after photos and videos from the event began to surface on social media. The most of the online buzz came from a video at the launch showing five girls dancing to Ed Sheeran's "Shape of You" song. In less than 16 hours, the original video and the reposted video have close to four thousand millions viewers. In addition, Nisa Kay, a *Youtube* personality was not exempted from the backlash as she was one of the ladies seen dancing alluringly in the event.

Understanding cross-culture based on national and religion.

Culture plays a big role in the development of human thoughts and behaviours. Ignoring cultural differences in an interaction can potentially signal trouble. Malaysia is a multi-racial country, which is comprised of Malays and Natives aborigine, Chinese, Indians, and others. Although a large segment of the cultural dimensions of these three large races are similar, there are differences in terms of degree and priorities of values. Malays and Native aborigine ranked honesty as first on their list of values, the Chinese placed courtesy as number one, and the Indians value family (Fontaine, Richardson, & Yeap (2002), Lailawati (2005)). However, non Malaysians who conducted research on cross-cultural management tended to overlook this phenomenon and presented their findings about Malaysians as though Malaysians were homogenous group (Fontaine & Richardson (2003), Lailawati (2005)). For instance, Fontaine,

Richardson, and Yeap (2002) state that, Malaysian Malays and Malaysian Chinese share some similar values but, Hofstede treats all Malaysian culturally similar. Malays are individuals who make up of the population in Malaysia, Indonesia, Brunei and the Philippines, and lesser in Singapore in what was once called the Malay Archipelago. Many Malays are muslim except for those in the Philippines who are mostly Christians. Hall's characteristic of high-context culture as argue by Lailawati (2005), provide illustrations of Malaysian Malays' communication cultural context. Brunei and Singapore, apart from their distinguish economic development, sharing the similar value with Malaysian Malays muslim. Moreover, Malaysia, Brunei and Singapore sharing the same jurisdiction of Islam that is Shafie, which lead to a similar perception when come to religiosity value.

Religion can be a factor which leads to different forms of cultural context. Some studies shown, that religion plays a significant role in communication especially for Muslims. For example, the word "patience" in the Quran "Al Asr, verse 3) which reads, "Except those who believe and do righteous good deeds, and recommend one another to the truth recommend one another to *patience* [italic added]…" (Al-Hilâlî & Khan, 1993; Lailawati, 2005) can be intepreted in several ways. Patience here can mean abstain, forgive, endure, calm, persist, tolerate, bear and wait depending on the situation or context of the occurrence. Malays who generally Muslims, their communication cultural root is partly shaped by the religion they embrace (Lailawati, 2005). In the workplace, high-context cultural practices seem more prevalent among Malaysian [Malay] managers where religion forms the basis of workplace behavior and treatment (Storz, 1999; Lailawati, 2005). In negotiation, the Malays' compromising and obliging conflict-handling styles (Wafa & Tee, 1997) are probably manisfestations of their collective nature (Abdullah, 1996; Tamam, Hassan & Said, 1996) who priotizing group over personel interest(Lailawati, 2005). However, Lailawati (2005) perceived that Malay culture is going through a cultural-context form of communication change. The high-context and collective community is gradually becoming more low-context and individualistic. For instance, in management, administrative policies and procedures have been made more explicit than it was before. Interactions seem to be more direct in order to achieve goals rather than to build relationships, while objectivity has replaced subjectivity. Rationality is preferred over emotionality.

Finding.

Adopting 7P's marketing mix in fashion industry.

Generally, we understand that marketing is an approach of numerous processes included in commuting the good and services from the fabricator or manufacturer to the immediate customer. It confides constructing the concept of goods and services by analyzing the related customer, advertising and distributing them to all the channels of selling. In the fashion industry, 7Ps marketing mix plays a crucial role. A normal business required 4's P of marketing mixed in strategy formulated. Fashion industry, requires 7P's marketing mix consists of original 4P's: price, product, promotion and place, and three additional three P's; people, process and physical environment. It is a technique of guiding the customers to choose your goods and service rather than electing the products of your rivals. The key is to search the right channel of marketing and disclosing the accurate message in order to influence the targeted customers. Competitive advantage consists of cost structure, products offerings, and distribution will be assisted by technology, and customer support through empowerment of employee associates (James, 2010).

Table 1.0: McCarthy's 7Ps Marketing Mix in Naelofar Hijab Marketing Strategy (Academy, 2018)

Marketing Mix	**How Neelofar Hijab apply 7Ps?**
Price	Premium Price – affordable price offer to all three genres of people (wealthy, middle and low income) in differentiated products without discounted offer.
Product	Revolutionize and simplify modest fashion, to make shawls more practical and easy to wear.
Promotion	They began selling their shawls at the bazaars and in catching up with the technology, selling their branded product online
Place	Neelofa's promotion through her role-played able to send the message about her product availability. Stockists available throughout Malaysia, Brunei and Singapore.
People	Originality matters and it can make a difference, but they chose to focus and invest more in R&D as well as producing and marketing more new designs in new ways. Customers gets affected and makes their view by looking at the way the product presented, packaging; the layout and design of the product plays an in the sales.
Process	Utilizing media and communication technologies along with the trending promotional strategies around her potential markets. Taking advantages from her actress popularity, media social active user in *Facebook*, *instagram* and *Youtube* channel in her e-commerce strategy.
Physical Environment	Using outfit of the day (OOTD) approach in promoting her product in–person fashion. Emphasize the feeling of physical evidence, to induce ultimate experience via OOTD in initiating her customer confidence with her products

Towards the exchange and progression of goods**, s**he had to be unique to venture in one of the most competitive fashion business within the three modern Muslim majority countries namely – Malaysia, Brunei and Singapore. Marketing is highly beneficial in deportation, transaction and progression of goods and services. Especially, products and services are contrived available to consumers by numerous intermediaries like wholesalers and vendors(Scott, 2018). Neelofa's marketing strategy started with a small team of trusted and like-minded individuals. Her team business objectives were to revolutionize and simplify modest fashion, particularly, to make shawls more practical and easy to wear. After countless brainstorming sessions, trials and errors, they came up with a design for an instant shawl and launched Naelofar Hijab in 2014. Like others, they began selling their shawls at the bazaars and in catching up with the technology, selling their branded product online. Lazada.Com recognized Neelofar Hijab's product line offered the best price in Malaysia, Brunei, and Singapore, worth the product quality(Lazada, 2018). Throughout the years, the instant shawls were a hit and more stockists were appointed to handle the increasing demand. Approximately there were 100 stockists available throughout Malaysia, Brunei and Singapore. Since 2014, Naelofar Hijab a brand under NH Prima International Sdn. Bhd. has produced more than 30 collections of hijab; tudung and shawl. Most of which are sold within minutes of their launches.

Marketing has a significant role in establishing living standards of the society, through the availability of continuous supply of goods and services to customers at a nominal price. As a drama major play role in Red Velvet, the romantic 20 episode Malay drama series featuring Neelofa and Alif Satar, it was another stepping stone to promote her products. Neelofar Hijab has rolled out a collection of instant tudung, shawls and scarves that were inspired by Neelofa herself as a role played. She wore the collection that features six designs that are Sweet Helena, Sweet Helena–Swarovski, Fluffy Helena, Milky Helena, Creamy Helena and Silky Helena-with styles and colours inspired by cakes and desserts that match with the drama bakery concept. Neelofa's promotion through her role-played able to send the message about her product availability to all three genres of people that a wealthy, middle and low income. Her idea seems to advance her competitor by expanding the living standard through her product rather that price competition.

Neelofar's marketing concept strategized by her team need to be dynamically and progressive in creating new ideas. When address a question by reporter, "is it easy to stay at the top of the game when tudung mainly comes in standard designs and their uniqueness is vague? Does having the designs patented as intellectual property rights make a difference in the business?". Neelofa answered "Originality matters and it can make a difference. But rather than focusing on getting our designs patented, we chose to focus and invest more in R&D as well as producing and marketing more new designs in new ways. To differentiate our products, we try to make the exclusive by adding accessories or unique embellishments such as the Swarovski crystals". Although the drama has ended, the Helena collection is still selling like hot cakes. Most of the designs were sold out on Naelofar Hijab's e-commerce site, where some designs were snapped up within minutes that was launch on October 26, 2017. A square scarf Milky Helena is a favourite and the company reprinted the design due to high demand. Her customers gets affected and makes their view by looking at the way the product presented, not just on the packaging; the layout and design of the product plays an important role in the sales.

Process, the sixth addition in 7P', is an integrated buying exposure from the prime segment of contact, generally the network or website, to distribution of goods or services. The process does not block there, instead it provides post sales service, and creating decent relations with customers even after the purchasing process. Like others fashion business, Neelofa is utilizing media and communication technologies along with the trending promotional strategies around her potential markets. Taking advantages from her actress popularity, Neelofa make the most of her status as media social active user in Facebook, instagram and Youtube channel in her e-commerce strategy. She was able to promote her product efficiently throughout her fans in social media from Malaysia, Singapore and Brunei. Using her product as outfit of the day (OOTD) in her role played was a successful method in promoting her product in–person fashion. "This is not the first time Naelofar Hijab has come out with a drama tie-in product. Last Year, we produced the Warda collection, which was inspired by the character I played in Surihati Mr. Pilot. Due to overwhelming response, Neelofa decided to do something similar again in emphasizing the feeling of physical evidence the seventh P's, to induce ultimate experience via OOTD in initiating her customer confidence with her products.

Naelofar Hijab's market segmentation and advertising objectives.

Will she be able to sustain her business due to her popularity as a drama actress? Neelofa need to post a close gap with her customer and attract more potential customer in positioning her products in the market. She need to acquired feedback about her product development as well as collecting ideas from her business to business (B2B) and business to customer (B2C). In line with its tagline, *Effortless Chic*, the brand strives to be different from other home grown hijab brands by reinventing the image of the hijab to one that is chic, modern, practical and hassle-free for confident women (Badarudin, 2017).

Neelofa's confidence was impetus as her own brand accepted widely and becoming international brand. She seems to know well her segment market. Segmentation is a technique to identify and satisfy the needs of specific groups of customers with similar requirements within market (Ismail, Kanesan, & Krishnan, 2018)(Kotler & Armstrong, 2015). Market segmentation targeting each segment with a specific product or service lay in the heart of marketing theory(Croft, 1994). Neelofa's product is an alternative that offering a "one size fits all" product to all markets. Naelofar Hijab offered different versions of product into groups on the basis of their knowledge, attitude, response and occasions. Neelofa close reviews with her user rate, status, and understanding her buyer-readiness, strengthens her brand loyalty. According to Ismail.*et.al* (2018), as Naelofar Hijab offered a wide range of product to their

customers, the company product segmentation helped them to understand and influence consumer buying decision and constituted Naelofar Hijab's marketing campaign. In 4 years around, Neelofar Hijab has offered 30 collections in their portfolio, with a variety of hijab styles in order to satisfy the diversity needs and tastes of their customers(Ismail, Kanesan, & Krishnan, 2018).

Secondly, geographically Neelofa and her Naelofar Hijab positioning the business within the facilitated business area and trade via e-commerce the nation's neighbours with potential similar market taste. The flagship store of Naelofar Hijab is located in Taman Tun Dr. Ismail (TTDI). TTDI is one of the facilitated business areas with accessible public transportation, good telecommunication service and utilities. And with the boutique close location to the main road, it enhanced the possibility for not only the existence customer to come, but as well as the first time customer who did not familiar with the area. Facilitate with improved logistic services and distant closeness, Naelofar Hijab gained advantages of similar market segmentation from neighbouring countries like Singapore and Brunei. She even planned to take her hijab fashion business abroad by making her first foray into New York. Demographically, Naelofar Hijab's shawl design, meets the criterion of youth and young woman who seek for active lifestyle, which fit the customers within age range 18-60. Her shawl design, intended to energize her Gen X and Baby Boomers customers with a modern and free style sensation when fashioning the apparel at their maturity age. Simultaneously, Neelofar Hijab focussed on career woman with promising income that willing to spend for great look and appearance and able to meet her *muslimah* customer different personality and needs.

It is important for every business to maintain their loyal customers repeat buying. In behavioural segmentation, buyers can be divided into groups on the basis of their knowledge of, attitude toward, use of, or response to a product, occasions, brand loyalty, user rate, user status, and buyer-readiness stage. Distinguish customer according to occasions for hijab's fashion was quite natural in most of muslim's fashion market. Neelofa making sure that her advertisement through social media provide information to communicate customer value, promoting her existing and new product, pricing and providing perception value about modern muslim women, who love fashion without exemption of holistic requirement. For example, Neelofar Hijab launched their collection of *tudung bawal* "Soulmate" to match with the Malay's traditional dress *baju kurung* for Eid celebration. This collection provides a quick makeover, uplifting even with the plainest and dull costume with its impressive design(Ismail, Kanesan, & Krishnan, 2018).

To sustain brand loyalty, it is essential to clearly understand the user status and their buyer-readiness. Every product has its nonusers, ex-users, potential users, first time users, and regular users (Kotler & Armstrong, 2015). The key to be successful is carrying out different marketing strategies in order to maintain the regular customers and attract new or potential customers(Ismail, Kanesan, & Krishnan, 2018). Neelofa maintain her reminder advertising in strengthening her customer relationships. Remind them where to buy her product even though it was off-seasons by reminding them the product may be needed in near future. Her constant tie-ins and aggressive marketing strategies via social media in Instagram, Facebook and Twitter up dated is a way for her to gain her user status. Neelofa used persuasive advertisement, to ignite her buyer-readiness stage into action. Her technique of providing styling tutorials and OOTD presentations by her increased the buying action for repeat buying and new buying from customers. Her marketing promotion and advertisement consists three primary purposes of advertising objective that is to inform, persuade and to remind, and help move customer through the buying process and she had an advantage as a role model in modern muslim followed fashion icon.

Naelofar Hijab's fashion show: Does she go beyond cultural sensitivity?

When is the right time to have a fashion show? Neelofa launched her new line of Neelofar Hijab's headscarves at Zouk Malaysia Club, a well known nightclub in Kuala Lumpur. Creating a new perspective of modern Muslim women, Neelofa was using a new method of introducing her product lines to the market by organizing and hosted the event in a well known venue. They took all necessary precautions to ensure attendees did not come into contact with alcohol, serving halal foods, where Zoux's management allowed outside caterer in serving for the event, and prohibited smoking. Neelofa's team chose a popular entertainment spot for the launching and hoping the precautions will avoid religious sensitivity. It took less than a day after the launched, that her new collection sold out in the market. The response was beyond expectation.

When her fans watch and found out they launched was in a nightclub, slashing perspectives from netizen come in. "You're mocking your own religion for the sake of your business and marketing…such an act is very disrespectful to other muslim women who actually wear hijab! We demand an apology" said @hanansha.twitter(Anonymous, 2018). Although most of the comment was negatively response to her, some said, she was a publicity seeker for the sake of her popularity and business. Some of her business celebrity colleague's gave positive but with critical response, "Neelofa's launch is a big surprise marketing stunt BUT extremely in-classy and unethical at the same time"(Tan J. , 2018). Why exactly Neelofa decided to launch her Naelofar Hijab's fashion show at Zouk, a nightclub? One of her disappointed fan stated, "It's her birthday and her brand. Meaning that her choice to be at Zouk. She can say no in the first place. There's a lot of other places she can launch or celebrate her birthday…she's in charge of everything", (@farahriot.twitter, 2018).

According to PR Couture.com, there are 5 factors to be considered when to do your fashion shows. First, there's an existing demand for your line. Fashion shows are too pricey to be pure experimentation or a way getting on a collection. It only made sense to invest in one if you have already garnered a strong demand for your brand. At the minimum, a loyal customer base, a certain amount of editors interest, and a business strategy that is bringing in consistent sales. Without the foundation, it will be harder to convince press, buyers and influencers to attend. Considering her three successful product lines introduced since 2014, Neelofa's fans and customers followed her brand fashion closely through her media social page. Her innovative design in hijab fashion was supporting by creative ecommerce promotion ads. A busy celebrity herself, Neelofa was a responding business woman. This, build up her potential businesses and strengthen her business and customer relationship. Demand for her product sustained and expanding to more than hundred outlets throughout the countries. She is after all, a face among fashion celebrities.

Secondly, the cost to produce the fashion show won't affect your ability to run your business. Running a fashion shows does not promise a return to your investment right away. That means, it could take days, weeks, and even months before you start seeing money come back. With her attractive and creative ads for the previous products launched, Neelofa's line was receiving positive response continuously. Business was hit and demand increasing. This should be the right time to get feedback through one-to-one contact with customers. In this case, initially Neelofa's intended for close and direct responses on her product lines. Customers wanted to get her product as soon as possible. She made it possible for customers to access her business outlets booking through online to secure customer order and buying. With an improved logistic and secure online payment across Malaysia, Brunei and Singapore, her product was made available to her customer in shortest time. Whether it was couriered or outlets collected. Therefore, it is important to make your production is already in place and working.

She was creating an image of modern and stylish women that wear hijab. The fourth factor in presenting your fashion show is you are willing to invest to create a memorable, press worthy experience. In the same way that you won't compromise on the fabric, you should not settle for a mediocre fashion week or runway show opportunity, just so that you can say you had a show (prcorture.com, 2016). Fashion shows are not a small investment, nor are they mandatory. You and your customers deserve the best show. Neelofa decided to choose Zouk despite it was a nightclub, as it was fit with her fashion show idea. Her product inspired innovative, simple, freedom and modern attire for women who wore hijab. Colours and good lighting express the idea perfectly. Zouk provided facilities that Neelofa felt complete a requirement for her runway show. Available with an attractive neon effects, sound system, LED displays, light boxes and supported with good technical personnel, and it was a package of opportunity for a tight budget. According to Neelofa, Zouk offered her eight times cheaper the cost than other venues she has chosen in her lists. Apart from that, Zouk intend to extend their business strategy from nightclub to event venue as other entertainment outlets.

As Neelofa herself is a well known drama celebrity with thousands of fans, it was not a difficult task for her to attract press and even members of celebrities to join her fashion show. To produce a show even for a small design house or new designer, has all the same elements and needs just as much attention and expertise(George, 2018). The fifth factor in show business, is to have reliable public relation (PR), marketing and sales strategy in place(Henderson, 2016)(George, 2018). Make sure that you have a robust communication plan that includes social media, email marketing, content marketing and more to keep brand recognition, reach and sales. Neelofa's business was established on this business ground, giving her the advantages to enhance quick response from potential buyers. Her idea in organized the fashion show is a great way to stimulate buzz for her growing businesses and heighted Naelofa Hijab's brand sales. Although, this strategy more suitable for established brands that possess a higher degree of capital and infrastructure, Neelofa's celebrity fame brought advantage on it strategy.

Table 2.0 Planning a Fashion Show(George, 2018)

Five Factors to be consider before Organizing a Fashion Show (PR Couture, 2016)
1. There is an existing demand for your line.
2. The cost to produce the fashion show won't affect your ability to run your business.
3. It is important to make production already in place and working.
4. In presenting your fashion show is you are willing to invest to create a memorable, press worthy experience. In the same way that you won't compromise on the fabric, you should not settle for a mediocre fashion week or runway show opportunity, just so that you can say you had a show.
5. You and your customers deserve the best show. Venue, facilities is suitable with fashion show idea. Colours and good lighting express the idea perfectly, and a package of opportunity for a tight budget

Discussion

Religious sensitivity led to cultural sensitivity.

As Boddewyn (1991) argued, offensive advertisements involve products, services, concepts, claims and/or imaginaries that elicit reaction of distaste, disgust or outrage. Quite often, ads accused of offense are legal and truthful. The word offensive is highly associated with the relational and situational context (Ma, 1996). Whether a word or an image is perceived to be offensive depends on the relationship between the parties involved and the occasion or situation where is exposed(Chan, Li, Diehl, & Terlutter, 2007). Culturally, Malaysia, Singapore and Brunei Islamic value has become a stronghold in the society culture. Although it may not be as radical as the middle east, the Malay and native cultures absorbing the

religious value- if not permanent but strong. The perception of nightclub and night clubbing was clearly against the religious value. Although she claimed that, it was her way of approaching to "dakwah", the provocative was towards the value of hijab and muslim women who wear hijab according to Islamic obligation. Furthermore, her hijab design was not adhere to the requirement of Islamic value in total.

Persuasion leads to negative influence.

A main reason in marketing, that market competitor found it very easy to erode any functional or value advantage attached in product. Companies are trying to reactive wide neglected manners of reaching to customers. Persuasion is to change someone's attitude, perception or behaviour as a communication goal(Sharma, Bhosle, & Chaudhary, 2017). Having millions of fans and followers in her social media, what was becoming the alarming issue is the persuasion she may portrayed to the muslim community, particularly the young women. Persuasion is a symbolic process in which communicators try to convince other to change people to change their attitudes or behaviour regarding an issue through the transmission of a message, in an atmosphere of free choice(Perloff, 2003). From tie-ins and aggressive marketing strategies via social media, providing styling tutorials and OOTD presentations by herself, Neelofa's company move to introduce new and exclusive collections more frequently within a year and able to boost sales. She was looking further, to see Neelofar Hijab become a household name internationally, with the brand having its own warehouse in Malaysia and all major cities in the world. "*Ultimately, I hope to do more to portray the tudung or hijab as part of a holistic lifestyle and not merely a fashion piece."* She hoped that perception about hijab to be change that hijab wearing women are not restricted and can be themselves. Her idea was well accepted among her modern and young hijab-wearing fans positively. However her show was negatively anticipated as to encourage young muslim women, who seek for freedom of idea and energetic life to the level of approving religious proscribe. That is, muslim women in hijab is free to clubbing and enjoying open entertainment, which is against the Islamic value. Although, there was no alcohol drink to be offered, the place itself was defined as a wrong place for *muslim*. Secondly, hijab in Islam is very dignified, and *muslim* women requires to wear *hijab* to cover their dignity. The launched in the nightclub was considered an act of Neelofa's disrespect to the religion and *muslim* women. In worsen the scenario, videos taken in the event show the "Lip Sync" activities and guests dancing while wearing hijab. This improper visual was define by netizen as intention to righteous the wrong doing as women in hijab was supposed to behave according to the dress conduct. The controversial issue brought with the video attracted attention not only netizen but as well as the religious parties. Musa Awang, the president of Malaysia Syarie Lawyers Association commented, that Neelofa and her guests who attended the Be Lofa product lines could be charged with insulting Islam for bringing disrepute to a symbol of the religion.

Cost management.

As fashion's production merry-go-round whirls ever faster, the role of the runway is changing in the digital age (Sarah Harris, British Vogue, 2014). It's a spectacle, and a social media push, (Raymond, The Future Laboratory, 2014). "The catwalk show has moved into the arena of culture and awe. We are no longer in the business fashion; we are in the business of entertainment. The notion of spending a million on a fashion show is relative (Angela Ahrendts, former CEO at Burberry, Apple 2014). It was never a problem for a house like Channel where sales figures are estimated to linger around the billion-pound mark, or a Louis Vuitton. But where does it leave younger, emerging designer? In London several designers rely heavily on sponsorship from big beauty brands and drinks companies. The similar situation is taken place everywhere around the globe. Cost for fashion runway is increasing in

Malaysia, that hindered young and new entrepreneurial from spending much on it. However, fashion shows are great at garnering attention and creating buzz. But they're usually not the best way to stimulate sales for start-up brands or emerging designers due to the lack of capital. Without a significant budget, the show itself is likely to suffer. There are five signs where fashion show is right for brand recognition. The right venue, experienced models, great publicists, smart and creative producers, talented hair and make-up artists, dressers and backstage assistants, and extra promotional dollars to pay celebrities to attend and drum up further media coverage.

In short, if you want a fashion show attended by top-tier, notable press outlets, influencers, buyers and target customers, the show itself needs to be top-notch; which often requires a sizeable budget. Many shows from new and small designers end up looking lack-luster and simply aren't much to write up. For a tiny budget, it would be a mistake for independent designers if making the fashion shows the only marketing activity to promote a collection. It required continues outreach planned or budget earmarked for additional strategies. It will be risky in case the fashion show doesn't meet expectations, there is no additional budget to invest in other tactics, and sometimes, that extends to dollars to actually produce inventory to sell. Therefore, after taking all this consideration seriously, Neelofa's Hijab Prima Sdn Bhd needs to choose plan and choose wisely on their spending.

Building brand identity.

Brands are now choosing the runway as a forum to build their identity for the season and show something outstanding and inspiring, although some may be difficult to produce and sellable (Mytheresa.com, 2014). The show has become a hub that serves as an opportunity for all facets of the industry to meet and swap ideas and gather collective on the season. There's a great interaction and learning to be had discussing the mood of the season (Chapman, R., -CEO, Matchfashion.com, 2014) that is extremely valuable when buyers and sellers mix. The collection is a great forum to watch fashion insiders to see what they're wearing and how. The gathering generates theatre and drama, and via street-style photography it engages and inspires customers too. (Harris, 2014).

O'Shea bated, when asked whether a buyer could do the job sitting at home, watching the new season fashion runway in live-streamed. Buyer still can buy she claimed, but it would be a pretty unfulfilling job that O'Shea think thought she rather be a compulsive gambler or something. The clothes on the catwalk are only half the story. The other half is gleaned from an overriding mood, a conversation, nuances and minutes details, a rolling camera can't transmit even if you have the closest zoom-in technology. Chapman supported (2014), that it would be a valuable for the fashion world to re-evaluate the timing of the shows and work more closely together internationally to create a calendar that works better for all', she says, adding, "I also feel strongly that not all designers need to show." For smaller and non ads spectator, the shows are the opportunity to convey that season's message because after that it's over to the retailers, the merchandisers, the editors and stylists to translate and to tell their own story with the clothes.

Implications to the Naelofar Hijabs'.

According to Lars Voedisch, founder of Precious Communication, being criticised creates awareness for her brand as Neelofa's personality and brand does not target a conservative audience. From a brand perspective, this incident could strengthen her brand among younger consumers. This was a similar to the ads that United Colours of Benetton launched their provocative ads in 1994 that led to continues debate, when addressing controversial issues such as racism or children as soldiers in civil wars. The brand was confident about being a little more edgy as it was consciously connecting with its target audience. As Voedisch added,

"in this instance, it didn't seem like Neelofa went all out to provoke. She merely took on a slightly more liberal approach and you could argue it brings a traditional headscarf into a modern lifestyle (Tan J. , 2018). David Lian, the managing Director of Zeno Group Malaysia, supported by confirming Neelofa controversial products launched has putting her more in the spotlight. He stated, while Neelofa has taken careful steps to construct an image for her, the controversy she's attracting has been putting her in the spotlight frequently and showing the public that she is a person with an independent streak. It was part of her brand to be seen as independent and maybe a little unconventional. She did goes against some conservative fans, but as Lian said; "She is carving her own space with those are more independent thinkers."

Conclusion

In conclusion, this study identified and discussed the significant of 7Ps' marketing mixed applied in Naelofar Hijabs and NH Prima International Sdn Bhd's marketing strategy formulated that lead to her continuous improvement in her innovative and progressive businesses. The core strategy in promotion fashion industry via social media required popularity engagement, whether the person was an immediate celebrity or creating a celebrity personality to attract potential customer. Physical evidence such as OOTD approach, and utilization of personnel status as media social active user; has established strong consumer foundations supporting the marketing strategy. Fashion shows are great at garnering attention and creating buzz. There are five signs where fashion show is right for brand recognition, such as the right venue, experienced models, great publicists, smart and creative producers, talented hair and make-up artists, dressers and backstage assistants, and extra promotional dollars to pay celebrities to attend and drum up further media coverage. Although, Neelofa has the advantages of all, and the courage to put on the show brought an excellent return on her investment, the eagerness to have her own brand runway show, lead her in neglecting the insensitivity of cultural sensitivity within her business environment. In conclusion, adaptation of media technologies in fashion businesses is crucial, as being sensitive to cultural sensitivity has become part of the important factors contributing to the market and the good practices in business. As an inductive single case study, this paper may create biased in defining the similar business within the industry. Given the inductive case limitation, empirical study is propose to be done and extended among the business player within the same industry.

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WOMEN COMPOSITION ON BOARD: REVISITING MALAYSIAN BASED COMPANIES

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Abstract: *It is undeniable that women's involvement in decision-making is of paramount importance. The Malaysian government acknowledges the significance of the women's involvement by announcing a target for the corporate sector to push for women to represent 30% of decision-making positions by the end of 2016. Thus, the current paper aims to determine the women composition on board by revisiting Malaysian listed companies. Previous researches have shown that companies can benefit by the presence of women on board. Their presence enable improvement in the companies' performance, increase the creativity levels, provide access to a wider range of resources and associations, and also could help to improve public relations. This study engages quantitative methodology using a sample of 268 companies listed on the Bursa Malaysia. This study finds only 55 listed companies have at least 30% women composition on board. The finding reveals that Malaysian listed companies do not pay heed to the government's aspiration of having at least 30% women on board as highlighted by the Malaysian Code on Corporate Governance 2017. Apart from adding to the existing literature, this finding is significant as it shows that it is still a long way to reach the target of at least 30% women on board. Thus, the policymakers need to review its approach in motivating the listed companies to enhance the women composition on their respective board.*

Keywords:*Women on board, Gender diversity, Corporate governance, Compliance*

Introduction

The composition of women on corporate boards has drawn significant interests among the academia and policymakers in recent years (Kirsch, 2018). Most of the studies examine the relevance of having women composition on boardroom and its effect on the organisational performance. Literatures have provided mixed evidences on the relationship between women on board and companies' performance, from significant relationship (e.g., Green and Homroy, 2018; Chadwick and Dawson, 2018; Usman, et.al., 2018) to no significant relationship at all (e.g., Yasser, 2012; Adam and Ferreira, 2009). Despite of these inconsistencies results, issue on gender diversity in the boardroom is gaining more considerable attention from both regulators and policymakers all over the world including Malaysia.

The Malaysian Government has formally acceded to Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) since 5 July 1995. Malaysia has to ensure that its law adhere to CEDAW. The main objective of CEDAW is seeking for the elimination of all forms of discrimination against women. By becoming a member to CEDAW, Malaysia is obligated to take all appropriate measures to ensure that all forms of

discrimination against women are eliminated with exception to the three reservations. Article 11 of CEDAW requires states parties to "take all appropriate measures to eliminate discrimination against women in the field of employment in order to ensure, on a basis of equality of men and women, the same rights". Malaysia's ratification of CEDAW has led to the establishment of Ministry of Women, Family and Community Development which plays a role in boosting the women roles in decision-making levels in Malaysia. In year 2004, the Malaysian Government has imposed the public sector agencies to appoint 30% women to be involved at the decision making levels. Upon seeing the success of achieving 30% women in decision-making in public sector, the then government extended the policy to the private sector and set 2016 as the year for meeting the target for the corporate sector to push for women to represent 30% of decision-making positions by the end of 2016 (Merican and Ghani, 2016) and the then Malaysian Prime Minister, Datuk Seri Najib Tun Razak had announced that the number of women should fill 30% or more of the decision making positions in corporate Malaysia by 2016 (The Star Online, 2015).

The policymakers' commitment is further noted with the establishment of the Malaysian Code on Corporate Governance 2017 (hereafter referred to as MCGG 2017) which highlights the requirement for diversity policy in board's composition. Where, the right board composition will ensure sufficient diversity and independence to avert 'groupthink' or 'blind spots' in the decision-making process. It also enables the board to be better equipped to respond to challenges that may arise and deliver value. The MCCG 2017 encourages every listed company to have at least 30% women directors (www.sc.com.my).

Taking into account the importance of having women composition on board, the objective of this article is to determine the women composition on board by revisiting Malaysian listed companies. The paper is organised as follows: it begins with the background, then it discusses the literature review, and followed by the research design and data collection used in this research. The last two sections present the results and discussion and conclusion section accordingly.

Literature review

Indeed, women play a significant role in ensuring an organization's goals could be achieved. The involvement of women can be seen in varieties of contribution. Such as they help to improve an organisation's performance, gain investors' confidence and approval, increase the innovation and also they are said to be more conservative hence more ethical. Therefore, the importance of gender diversity can be seen from three different perspectives, i.e. (1) Human Capital Perspective – gender diversity would help to close the gap on brain drain, thus providing more sustainable and stronger talent pool; (2) Business Perspective – by having a gender diversified workforce helps to provide the check and balance in the strategic planning for greater productivity; and (3) Investment Perspective – international funds now look at board diversity as a component for consideration before investing (Foon, 2017).

How far women presence has significant impact on the organization's performance? This can be proven by a study done by Liu, Wei and Xie (2013) who examined the effect of board gender diversity on company's performance. The study found a positive and significant relation between board gender diversity and company's performance. Besides, Tanaka (2018) also proved that with more female directors, companies exhibited higher performance. It is indisputable that the involvement of women on board could help to improve companies' performance to be better. They give a lot of advantages to organizations. Such as, it will raise the creativity levels of the organizations, provide access to a wider range of resources and associations, and improve public relations. Besides, their involvement is believed to gain the approval of investors and consolidate perceptions of the firm's legitimacy. In addition, by putting women into the executive suite can result in stronger growth and considerable

increases in return on sales, invested capital, and equity (Human Resource Management International Digest, 2017).

It seems that shareholders prefer to have more women on board. It is because larger fraction of women independent directors are more likely to impose high dividend (Chen, Sau Leung and Goergen, 2017) which is it is the main reason that attracts investment. Women's presence is also said to have significantly related to the accounting performance of a company. Bennouri, et al. (2018) found that female directorship significantly increases the firm's accounting performance, i.e. measured by Return on Assets (ROA) and Return on Equity (ROE). Meanwhile, Ku Ismail and Abdul Manaf (2016) examined market reactions to the appointment of women to corporate boards, and they observed whether their attributes and role in monitoring would affect companies' value. They concluded that investors welcome the appointment of women directors by saying that the investors reacted positively when companies announce the appointment of women directors as evidenced by positive abnormal returns. Interestingly, they found that investors were more likely to favour women who are prominent, young, have no international exposure, and have no family relationship with any other director. These findings supported the initiative taken by the Malaysian Government i.e. to promote women's participation on corporate boards.

The board gender diversity is a serious matter that should be emphasized. Gordini and Rancati (2016) documented that greater gender diversity might generate economic gains and it will not destroy shareholder value. Thus, the companies should focus their efforts on the right mix of men and women rather than on simply the presence of at least one woman on a board of directors. Furthermore, there is significant relationship between board gender diversity and sustainability reporting and shareholders' welfare. Arayssi, Dah and Jizi (2016) reported that the presence of women on corporate boards favourably influences on companies' risk and performance through promoting a firm's investment in effectual social engagements and reporting on them. Moreover, when dealing with the levels of information asymmetry in the stock market, the shareholders expect that companies could produce a quantity and quality of public disclosure. Whereby, it means that lower levels of information asymmetry can be obtained through producing the quantity and quality financial report. In relation to that, Abad, et al. (2017) found that the gender diversity on boards was negatively associated with the level of information asymmetry in the stock market. This study indicated that the presence of women on director boards increases the quantity and quality of public disclosure by firms.

When women directors have the chance to actively participate in board discussions and present their perspectives, boards may benefit from their women directors' talent in making strategic decisions and increase companies' innovative and creativity. Torchia, Calabro, Gabaldon and Kanadli (2018) found evidence that woman directors contribute positively and significantly to organizational innovation. In addition, Chen, Leung and Evans (2018) showed that female board representation was associated with greater innovative success, and thus enhances companies' performance in innovation-intensive industries.

Lastly, women are said to be more ethical than men when they perform their job in the workplace. It can be seen in the earnings management practice in preparing financial statements for corporate companies so that the financial statements produced consists of high earnings quality. High earnings quality is essential for current and potential shareholders' decision making purpose and the quality of earnings refer to the degree to which a reported earnings number conveys relevant, credible and reliable information about a company's financial performance reality (Nasution and Jonnergard , 2017; Krishnan and Parsons, 2008; Dechow et al., 2010; Penman, 2003). Managers in the firms with a higher number of female and independent female directors prefer to engage in income-decreasing rather than income-increasing earnings management (Arun, Almahrog and Ali, 2015). Kyaw, Olugbode and

Petracci (2015) revealed that a gender diverse board mitigates earnings management in countries where gender equality is high. In addition, female top managers are more conservative and deliver higher reporting quality compared to male (Duong and Evans, 2016) and they also promote effective monitoring earnings management (Gull, Nekhili, Nagati and Chtioui, 2018). Gavious, Segev and Yosef (2012) found evidence for a negative relation between the presence of female directors and earnings management. Which is it indicated good sign i.e. earnings management was lower when either the CEO or the CFO was a woman. In addition, the presence of women on audit committees leaded to income-reducing earnings management (Thiruvadi and Huang (2011); Abdullah and Ku Ismail (2016).

Research Methodology

The objective of present study is to determine the women composition on board by revisiting Malaysian listed companies. The MCCG 2017 has highlighted that the board must have at least 30% women directors. Thus, the study is aiming to examine how far the Malaysian listed companies comply with the requirement of MCCG 2017.

Research Design

The study engages quantitative methodology by using a sample of 268 companies that are listed in the Main Market of Bursa Malaysia. Under the quantitative method, there are two types of samples i.e. probability samples and non-probability samples. The current study uses the probability sampling which samples are selected randomly using either one of four techniques to collect the data. The probability sampling is the best method to achieve a representative sample (Hajimia, 2014). One of the four probability sampling techniques namely random technique was used in this study. Based on this technique, all the companies listed at the Main Market Bursa Malaysia were listed according to their alphabets and the samples of 268 companies were selected randomly from the list.

Data Collection

The initial data of 321 companies were collected out of 800 companies listed in the Main Market. However, due to the date incompletion and redundancy, only 268 companies were used in the study. This research also did not include the finance and real estate investment trust (REIT) type of industries because of their unique characteristics and the specific rules and regulations imposed on them by the Central Bank of Malaysia (Abdullah and Ku Ismail, 2016). Out of 268 selected companies, there were two types of information collected in the companies' annual report ended in 2017, i.e. (i) number of board of directors' members; and (ii) number of women on the respective board. The reason for choosing the 2017 financial year because the MCCG 2017 highlighted that there must be at least 30% women at boardroom. Furthermore, this is nothing new as the then Malaysian Prime Minister, Datuk Seri Najib Tun Razak had announced that the number of women should fill 30% or more of the decision making positions in corporate Malaysia by 2016 (The Star Online, 2015). There are 11 types of industries involved in the current study. Table 1 below shows the number of companies selected based on their types of industries.

Table 1: Number of Companies and their Types of Industries

Types of Industries	Number of Companies	Frequency
Construction	13	4.9%
Consumer Product and Services	73	27.2%
Energy	9	3.3%
Health Care	7	2.6%
Industrial Product and Services	91	34.0%
Plantation	17	6.3%

Property	32	11.9%
Technology	4	1.5%
Telecommunication and Media	10	3.7%
Transportation and Logistics	9	3.3%
Utilities	3	1.1%
Total	**268**	**100%**

Majority of the samples are from Industrial Product and Services (34.0%). Whereas, the least samples are under the Utilities industry which represents 1.1% only.

Results

The present study aims to determine the women composition on board by revisiting Malaysian listed companies. The study reveals that out of 268 companies selected, only 55 companies comply with the Malaysian government requirement, i.e. to have at least 30% women composition on board. This represents only approximately 21% out of samples meet the objective of the study. Table 2 below represents the percentage of compliance and non-compliance of the selected companies based on the types of industries. The percentage of compliance and non-compliance are calculated based on total number of companies, i.e. 268.

Table 2: Types of Industries and Percentage of Compliance and Non-Compliance

Types of Industries	% Compliance	% Non-Compliance
Construction	0.7	4.1
Consumer Product and Services	6.7	20.5
Energy	0.4	3.0
Health Care	0.7	1.9
Industrial Product and Services	6.1	28.0
Plantation	1.2	5.2
Property	2.2	9.7
Technology	0.4	1.1
Telecommunication and Media	1.1	2.6
Transportation and Logistics	0.7	2.6
Utilities	0.4	0.7
Total	**20.6**	**79.4**

Consumer Product and Services and Industrial Product and Services types of industries show higher percentage of compliance with 6.7% and 6.1% accordingly. While three types of industries, namely Energy, Technology and Utilities represent the lowest percentage of compliance at 4%.

Discussion and Conclusion

The overall finding proves that Malaysian women are still under-represented in corporate boards. This research evidences that there is still in lower rate among Malaysian listed companies in complying the government's rules and requirements. The finding reveals that Malaysian listed companies do not pay heed to the government's aspiration of having at least 30% women on board as highlighted by the MCCG 2017. Apart from adding to the existing literature, this finding is significant as it shows that it is still a long way to reach the target of at least 30% women on board. Thus, the policymakers need to review its approach in motivating the listed companies to enhance the women composition on their respective board. Future researches are suggested to study of the reasons of non-compliance of the listed companies.

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IS THERE EVIDENCE FOR THE POLLUTION HAVEN HYPOTHESIS FOR ASEAN COUNTRIES?

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Abstract : *The production of goods and services in economy may create pollution that affects our environment. The pollution haven hypothesis described the situation where developed countries relocate their dirty production to countries with less stringent environmental regulations. This paper contributes to the empirical literature on the effects of the volume of exports and imports of dirty goods on environmental regulation. The study focuses on dirty industries in the Association of South East Asian Nations (ASEAN). Panel data from the years 2002 to 2017 is analysed using the Environmental Kuznets Curve (EKC's) framework. Our findings show that there is a negative relationship between environmental regulation and the volume of exports, and a positive relationship between environmental regulation and the volume of imports. There is no evidence to suggest that the pollution haven hypothesis is valid for ASEAN countries for the relationship between the volumes of import and environmental regulation, meanwhile a negative relationship between the volumes of exports and environmental regulation is consistent with the existence of the pollution haven hypothesis in ASEAN countries.*

Keywords*: Pollution Haven Hypothesis, Environmental Kuznets Curve, Panel Data Analysis, ASEAN*

Introduction

Today, the Association of South East Asian Nations or ASEAN is considered as one of the successful regional organizations in terms of economic, political and social cooperation. However, the implementation of environmental regulations within ASEAN countries differs between ASEAN countries because of differences in the rate of the expansion of dirty industries in each country. This study investigates whether the pollution haven hypothesis exists for ASEAN. Pollution haven hypothesis refers to the relocation of the pollution intensive (dirty) industries from one country in order to set up factories abroad to take advantage of less strict environmental regulations in other countries. This pollution control behaviour generates impacts on investment and trade flows. According to Aller et al., (2015) emphasized that there is a relocation of the industries from developed countries to developing countries since an increasing trend of international trade. The implication of trade liberalization certainly gives implications to developing countries environmental regulation quality. In addition, less developed countries has a negative effect as well as positive effect from the trend.

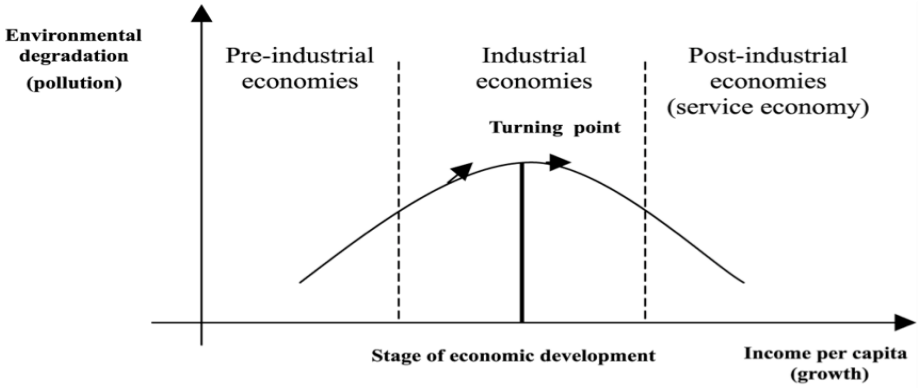
This paper investigates the following questions: (i) is there a negative relationship between environmental regulation with the volume of export and volume of import in

ASEAN countries?; and (ii) does the pollution haven hypothesis describes trade in ASEAN countries?

The organization of this study is as follows. In section 1, the paper presents introduction of research. In section 2, the paper presents reviews of related literature. Section 3 presents the methods and empirical equations. Section 4 provides results of analysis of data, and section 5 presents a discussion of the findings and recommendations.

Previous Literature Reviews

The Environmental Kuznets Curve (EKCs) hypothesis founded by Simon Kuznets (1955) is an inverted-U-shape relationship between pollutants and income (per capita). The EKC shows that in the beginning, environmental pressure increases until to a certain level of income, and then, as income continues to rise, pollutant levels decrease. The EKCs reveals how environmental quality changes with changes in income levels: at the beginning for pre-industrial economy, then to post-industrial, and eventually to service economy. This is shown in diagram 1 below:



Source: Panayotou (1993)

Diagram 1: Environmental Kuznets Curve Model

Tobey (1990) analyses directly the effects of differences in environmental standards on patterns of world trade and found no significantly negative impact of the stringency of environmental standard on exports of pollution-intensive industries as a whole. Akbostanci et al., (2007) explored the existence of pollution haven hypothesis and found that there is a negative relationship between environmental regulation and exports; their estimation results indicate that pollution intensity of different industries seems to be a determinant of exports. Their estimated model shows that, as the dirtiness of the sectors increases, the demand for manufacturing exports increases as well. Arik Levinson and M. Scott Taylor (2008) re-examined the relationship between trade flows and abatement costs. In that study, environmental regulations, whether endogenous and exogenous, found increases in pollution abatement costs with decreases in net export value. In addition, Xinzheng and Zhufeng (2018) found that firms' volume of exports, especially for pollution-intensive industries, decreases as an effect from stricter of environmental regulation. Meanwhile, Holladay (2016) use panel data to estimate a robust relationship between international trade and pollution levels, and found that there was significant heterogeneity across industries, and the result shows that there is no evidence of relocation to countries with low levels of environmental regulation, and importing back into the U.S.

Mani and Wheeler (1998) investigates six sectors involving iron and steel, industrial metals, non-ferrous metal, pulp and paper, non-metallic, and industrial chemical and found a

temporary pollution haven effect in an examination of import-export ratios for dirty industries. Meanwhile, Grossman and Krueger (1991) found that pollution abatement costs is not affected imports. Arik Levinson (2009) separated the literature into first and second generation studies and treats environmental regulation as exogenous. He found that these studies typically found no statistically meaningful evidence in support of the pollution haven hypothesis. Meanwhile, for the second generations' studies, they typically found statistically significant evidence in support of the pollution haven hypothesis. Conversely, Lisa A. Cave and Glenn C. Blomquist (2008) examine the impact of industry dirtiness on imports. Their results show that there is evidence for imports of increased amount of energy intensive goods from poorer nations during a period of more stringent environmental standards. Lastly, Jung-Ah Hwang and Yeonbae Kim (2017) studied manufacturing sector under static and dynamic conditions with analyses of environmental tax, tax of energy, and the emissions trading systems to find that environmental tax and energy limit the volume of imports, mainly for the high-energy consumption groups.

Methods

This section discusses data sources, methods of analysis and econometric models. Methods used in the analysis include descriptive analysis, pooled ordinary least squares, correction analysis, the Hausman test and the Langrage-multiplier (LM) test.

Framework

This study adopted the EKC's framework. Environmental regulation is the dependent variable (measured in million dollar), while income per capita (measured in million dollar), volume of export (measured in million dollar) and volume of import (measured in million dollar) are independent variables.

Data

In the current analysis, environmental regulations, measured by the environmental performance index of country, is the dependent variable, while income (per capita), volume of exports, and volume of imports are the independent variables. A short panel data from year 2002 to 2017 (16 years) is used, involving ten of ASEAN countries: Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam.

Methods of Analysis

Panel data analysis is used in order to study the following: 1) the negative relationship between environmental regulations with volume of exports and the negative relationship between environmental regulation with volume of imports; and 2) to examine the existence of pollution haven hypothesis in ASEAN countries.

The relationship between environmental regulation with export (X), and import (M) is tested using the empirical equation as below:

$$R_{it} = \beta_{0\,it} + \beta_{1\,1it}\,\text{Ink}_{1it} + \beta_{2\,2it}\,X_{2it} + \beta_{3\,3it}\,M_{3it} + \varepsilon \qquad (1)$$

Indicator:

R_{it} = Environmental Regulation (measured in Environmental Performance Index- EPI), Ink_{1it} = Income (per capita), X_{2it} = Volume of Export, and M_{3it} = Volume of Import.

Findings

Table 1 (see appendix A) shows the descriptive statistics which consist of the values of the mean of the data, standard deviation, minimum, maximum, and the number of observations for each variable.

Fixed Effect Method

The results from the chow test regression analysis chose the fixed effect method as shown in Table 2 (see appendix B). The coefficient of the independent variables, income (per capita) and import were found to have a positive relationship with environmental regulation, and a negative relationship between environmental regulation and volume of exports. The coefficient of volume of exports is statistically significant at the 5 percent level of significance, and indicates that a one percent increase in exports will decrease environmental regulation by -0.2390567 percent. Meanwhile, import was found to have a positive relationship with environmental regulation, statistically significant at the 5 percent level of significance. The result indicates that one percent increase in import increases environmental regulation by 0.2373639 percent.

Hausman-test: Random Effect Method

The Hausman method is used to determine the appropriate method between either the fixed-effect method or the random-effect method is appropriate (see Gujarati, 2003). The result of Hausman-test is shown in Table 3 (see appendix C). It reveals that the value of chi-squared static is 4.8 and the p-value is 0.1869. Therefore, the result indicates that the null hypothesis (H_0: random effects) more appropriate than (H_1: fixed-effects) for this panel data set.

Lagrange Multiplier Statistic

Since the Hausman-test result shows that the random-effects is the appropriate method to use, we use the Lagrange-Multiplier method to determine whether the random-effects method (H_1) is more appropriate than common pooled OLS (H_0). The result shows that p-value is 0.0377, which is the value of (prob > chibar2) < alpha 0.05, as in Table 4 (see appendix D). Therefore, H_1 cannot be rejected, which means that the random-effects method is more appropriate than Pooled OLS.

Discussion and Recommendations

The result of the empirical analysis show positive relationships between environmental regulation with volume of imports and negative relationship with volume of exports. In this paper, the analysis looks relationship between how the total volume of imports and the total volume of exports influence environmental regulations.

For the volume of imports, we assume that most of imports are from developed countries where countries have stricter environmental regulations. It means an increase in volume of imports of clean products, for example hospitality, tourism, and education that may induce less strict environmental regulation in developing countries. However, the results show a positive relationship between imports and environmental regulation; this means that a volume of imports induces stricter of environmental regulation, which is contrary to our expectations. One explanation could be that our data may suggests that the total volume of import may not be composed of cleans goods of products.

Meanwhile, for the volume of exports, we assumed that since developing countries are mostly engage in agriculture and manufacturing industry which can be described as pollution intensive industries, this may induce less stringent environmental regulations if the exports are mostly dirty goods. Therefore, an increase in the volume of exports may influence environmental regulation in a negative manner. Our results show a negative relationship

between exports and environmental regulations; this indicates that the volume of exports affect environmental regulation negatively. Assuming that the production of dirty goods in the domestic country include industries that allows the relocation of dirty production from developed country into developing countries such as ASEAN, then our result of a negative relationship between exports and environmental regulation is consistent with the existence of the pollution haven hypothesis (see Copeland and Taylor, 2004) who propose that stringent of environmental policy has a negative influence on the production of polluting goods.

Since the results are not shows both in negative relationship as in international trade predictions, we propose that for future research, we use more comprehensive of data that is segregated to reflect imports and exports from pollution intensive industries used in our empirical analysis. We would also propose to test for bi-directional relationships in analysis.

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Appendices

Appendix A

Table 1: Summary of Panel Data

$R_{it} = \beta_{0\,it} + \beta_{1\,1it}\,Ink_{1it} + \beta_{2\,2it}\,X_{2it} + \beta_{3\,3it}\,M_{3it} + \varepsilon$ (1)

Variable		mean	std. dev	min	max	observations
Logepi	overall	1.71115	0.135066	1.412629	1.95424	N = 160
	between		0.11877	1.527424	1.91682	n = 10
	within		0.073942	1.596353	1.87525	T = 16
Logink	overall	3.50437	0.669078	2.305351	4.95699	N = 160
	between		0.647707	2.809039	4.59805	n = 10
	within		0.260228	3.00068	4.46323	T = 16
Logx	overall	2.883941	3.600629	-0.737623	15.5916	N = 160
	between		0.839876	0.6388227	3.55508	n = 10
	within		3.510795	1.03283	15.0445	T = 16
Logm	overall	2.834749	3.616047	-0.90346	15.6194	N = 160
	between		0.880298	0.5380224	3.58944	n = 10
	within		3.517666	1.003082	14.9978	T = 16

Appendix B

Table 2: Summary of Pooled OLS

Source	ss	df	Ms
Model	2.2756838	3	0.758561267
Residual	0.62493123	156	0.004005969
Total	2.90061503	159	0.01824286

Number of obs = 160
F(3, 156) = 189.36
Prob > F = 0.0000
R-squared = 0.7846
Adj R-squared = 0.7804
Root MSE = .06329

logepi	coef	Std. err.	t	P>t	[95% Conf. Interval]	
logink	0.2008487	0.0090342	22.23***	0.000	0.1830035	0.21869
logx	-0.2390567	0.0385706	-6.2***	0.000	-0.3152447	-0.1629
logm	0.2373639	0.0381983	6.21***	0.000	0.1619114	0.31282
cons	1.02386	0.0300456	34.08	0.000	0.9645107	1.08321

*** Significant at 1% level of significance where the critical value is 2.609
** Significant at 5% level of significance where the critical value is 1.976
* Significant at 10% level of significance where the critical value is 1.653

Appendix C

Table 3: Summary of Hausman Test

	Coefficients		b-B	sqrt(diag(V_b-V_B))
	b	B	difference	S.E.
	fe	re		
logink	0.1657613	0.1929769	-0.0272156	0.0175415
logx	-0.2010047	-0.2160768	0.0150721	0.0251571
logm	0.2000569	0.2144156	-0.0143587	0.0253709

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(3) = 4.8

Prob>chi2 = 0.1869

Appendix D

Table 4 : Lagrangian Multiplier (LM) Test

Breusch and Pagan Lagrangian multiplier test for random effects

logepi[country,t] = Xb + u[country] + e[country,t]

Estimated results:

	Var	sd = sqrt(Var)
Logepi	0.018243	0.1350661
E	0.003697	0.0608065
U	0.000362	0.0190363

Test: Var(u) = 0

chibar2(01) = 3.16

Prob > chibar2 = 0.0377

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THE EFFECT OF GOVERNMENT INTERVENTION ON THE SUSTAINABLE COMPETITIVE ADVANTAGE AMONG SMES OF SERVICE SECTOR IN MALAYSIA

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Abstract: *This pilot study is conducted to see whether government intervention has affected the sustainable competitive advantage of SMEs in Malaysia. It has become imperative since the numbers of SMEs establishment in Malaysia rose every year. However, their sustainability towards competitive advantage was questionable whether it is due to the intervention of the government or their own effort. It was focused on a general question whether government intervention importance among SMEs and provides empirical verification on types of government intervention received by SMEs. In an attempt to contribute to the body of knowledge in this area, this paper collected 30 respondents for pilot testing before commencing the main research study on sustainable competitive advantage. Data were collected from the SMEs of service sector that have been established at least five years in Malaysia through questionnaires and analysed using SPSS version 21.0 and SmartPLS 3.2.7 for reliability result. The results show that there is a significant moderated relationship of government intervention towards information management capability and sustainable competitive advantage. Therefore, most SMEs agreed that government intervention is important towards the sustainable competitive advantage and success of SMEs.*

Keywords: *Government intervention, sustainable competitive advantage, small medium and enterprises,SMEs*

Introduction

The evolution of SMEs in Malaysia has been started up in 1971 with the implementation of the New Economic Policy (NEP) introduced by late Prime Minister Tun Abdul Razak that designed to increase people's wellbeing and streamlining the imbalances of ethnic economic. In 2010 the Malaysian Government unveiled the New Economic Model (NEM) that was needed to transform Malaysia into a high-income nation by 2020. As a result, in 2010 the National Transformation Programme (NTP) was implemented the NEM aligned with The Economic Transformation Programme (ETP) launched by then Prime Minister Y.A.B. Datuk Seri Najib Tun Razak on 25th September 2010. The vowed by the Malaysian Governments to strengthen SMEs can be seen from the level of execution of the Malaysia Industrial Master Plan, predominantly the Industrial Master Plan 2 or IMP2 from 2000 to 2005 which was followed by the IMP3 covering 2006 to 2020. The implementation and monitoring of the ETP and Government Transformation Programme (GTP) are overseen by the Performance Management and Delivery Unit (PEMANDU), which was established in September 2009 as a unit within the Prime Minister's Department (PEMANDU, 2012).

There are many policies in Malaysia are supporting to the entrepreneurs, including funding, physical infrastructure and business advisory services. The government is playing an important role in entrepreneurship development. According to Global Entrepreneurship Monitor (GEM), in Malaysia there are many government-led initiatives headed by experts which provide funding to entrepreneurs. Currently there are 14 agencies working under 8 ministries that provide grants for research and development (R&D) activities. Example of key ministries and agencies include the Ministry of Science, Technology and Innovation (MOSTI), Unit Inovasi Khas (UNIK), the Malaysian Innovation Agency (AIM), the Ministry of Higher Education (MOHE) and the Malaysian Technology Development Corporation (MTDC). They are responsible for innovation-related policies. It shows that the government intervention has play a vital role in helping and boosting the business activities especially for SMEs.

In the SMIDEC report's 2007 foreword by then Minister of International Trade and Industry Malaysia (MITI) Tan Sri Rafidah Aziz, to strengthen the economic foundation of SMEs in key industrial clusters, the Government continues to provide strong support in developing competitive and resilient SMEs. Gaining competitive advantage is critical for small medium and enterprises (SMEs). It is understood that across sectors, most firms should recognize that attaining competitive advantages is the most challenging issue facing firms in the 21st century (Eniola & Ektebang, 2014; Munir, Lim, & Knight, 2011; Supriyadi, 2017; Tasmin et al., 2016).

Living in this globally competitive environment, SMEs must ensure their existence can be lasted longer and remain sustain over period of time. It is important to know the percentage of firms that close their business in a given year and to compare it over time, across countries and around the globe. According to SME Annual report 2015/2016, more than half of start-ups fail within the first five years, with rates of surviving firms varying from less than one in five firms in Lithuania to about two-thirds in Sweden. In Austria, Belgium, Luxembourg, the Netherlands and Sweden, the survival rates of start-ups are consistently higher than in other countries (SME Corp Malaysia, 2016). Emphasis has been given to creating competitive advantage based on information and communications technology (ICT), capacity building and enhanced productivity, to enable the SMEs to face the challenges of a more liberalised market (SMIDEC, 2007).

Literature review

Sustainable Competitive Advantage

The empirical indicators of the potential of firm resources to generate sustained competitive advantage value, rareness, imitability, and substitutability (Barney, 1991). According to Hoffman (2000), sustainable competitive advantage is the prolonged benefit of implementing some unique value creating strategy not simultaneously being implemented by any current or potential competitors along with the inability to duplicate the benefits of this strategy. In line with this, it is important for all SMEs to ensure their understanding on the types of resources/capability possess by their organization can give competitive advantage and contribute to the SCA.

This is because, from the services sectors, most of the sectors provides homogenous products and services. In order for them to sustain, they have to ensure what they can offer is absolutely different from their competitors without jeopardising the concept of sustainable competitive advantage comprises of value, rare, inimitable and non-substitutable (Barney, 1991; Barney, Wright, & Ketchen, 2001). In study by Coplin (2002), the researcher believes and has addressed the idea that businesses all over need to explore how their resources and skills can be transformed into competencies and competitive advantages that will position the firm in advantageous position vis-à-vis competitors. One of the important resources would be

information. According to Barney (1991) one of the competitive advantage is information as a strategic resource.

Therefore, based on the existence of the valuable and abundance of information created in SMEs, this paper highlighted information capability as one of the pivotal back born mentioned in supporting SCA. Information in this aspect will be considered as an important asset and resource along with technology and innovation (S.L. Jarvenpaa & D.E. Leidner, 1997), since the negligence in technology can decrease the competitiveness of the enterprise and fail to produce expected result since ICT and innovation are the keys in organization success (Agafonov, Genin, Kalinina, Brel, & Zhironkina, 2017; Junaidah Hashim, 2007; Saira, Zariyawati, & Annuar, 2010).

Information Management Capability (IMC)

In this study, the information can only become sustainable competitive advantage if it has certain capabilities. According to Mithas et al. (2011), IMC refers to a firm's ability to leverage IT resources to provide accurate and valuable information for the firm to improve its competitive advantage (Mithas et al., 2011).

SMEs with innovative products or service, gain a competitive advantage over other firms, which in turns help them in the process of internationalization & engagement in foreign collaborative projects (Pierguiseppe & Guisseppina, 2005; Ramayah, Lim, & Mohamed, 2005), but this somehow cannot be implemented without the help from a good information as a global enabler with the potential or desire to begin international activities could improve and benefit from their information practices (Julien & Ramangalahy, 2003; Levy & Powell, 2005). The use of information and internet has helped producing the innovation in clusters, no longer geographically (Gupta, 2007).

Normally, the information always been considered as important only when it gets help from the technology and people innovate it into new ideas. But technology and innovation cannot give impact towards the performance of SMEs without having an accurate, reliable and good information. This consistent with Mithas, Ramasubbu, & Sambamurthy (2011) that the ability to provide accurate, timely, and reliable data and information to appropriate entities and stakeholders permit firms to configure and tailor other organizational capabilities that might influence firm performance.

Government Intervention

Government plays a critical role in shaping the success of SMEs. The Government is already helping SMEs by providing financing, promotion, developing capacity, marketing, and through many other aid programmes under various Ministries and agencies. One area where the Government can help a business like in SMEs is to provide proper infrastructure and business facilities in rural areas where there are no telephone and internet access, electricity, water supply, irrigation and drainage and other basic amenities (SME annual report 2016/2017).

Many studies show that the government has intervene in many ways to help the company, for instance in financial aspect (Cull, Li, Sun, & Xu, 2013; Owenvbiugie, 2017), adoption of green innovation (Kousar, Sabri, Zafar, & Akhtar, 2017), policy (Lazzarini, 2012) and any government related intervene and assistance. Apart from providing direct funds, fiscal measures such as tax reductions or exemptions also play a role (Alhnity, Mohamad, & Ishak, 2016). Therefore, in this study, government intervention was selected to be examined for its moderating impact into the IMC and SCA relationship.

Findings

The total responses were 30 companies. The companies have been selected based on the following characteristics:

- Established at least 5 (five) years
- Award recipients (E50 and SME100– the enterprise award meant for SMEs achievements among small firms)
- Service sector

Based on the analysis, the responses were highly obtained from two subsectors, wholesale & retail trade and food & beverage (23.3%), accommodation, ICT, health services and professional services with 10% respectively, finance & insurance (6.7%) and 3.3% for education services and real estate. 20% of the companies have at least 5 – 7 years of establishment, with 50% have more than 11 years of establishment. 100% responses agreed on the importance of government intervention towards the sustainable competitive advantage of SMEs.

Table 1: Convergent validity

Construct	Items	Loadings	CR	AVE
Information Management Capability	IMC1	0.729	0.913	0.602
	IMC2	0.752		
	IMC3	0.856		
	IMC4	0.718		
	IMC5	0.845		
	IMC6	0.809		
	IMC7	0.706		
Government Intervention	INVOLVEMENT	SIM	NA	NA
Sustainable Competitive Advantage	SCA1	0.840	0.903	0.654
	SCA2	0.883		
	SCA4	0.855		
	SCA5	0.816		

Note: IMC8, SCA3, SCA6, SCA7 and SCA8 were deleted due to low loadings

Convergent validity is the extent to which a measure correlates positively with alternative measures of the same construct, and to establish convergent validity, researchers consider the AVE (Hair, M.Hult, Ringle, & Sarstedt, 2017). The results shown in Table 2 indicates that the scales have good convergent validity where all items show above 0.7, 0.5 and 0.7 respectively for loadings, AVE and CR. According to Hair, Babin, & Krey (2017), convergent validity was reported based on loadings > 0.70 , average variance extracted (AVE) > 0.50 for each construct. and composite reliability (CR) > 0.70 (in exploratory research, 0.60 to 0.70 is considered acceptable). This reveals that as information management increases, the sustainable competitive advantage of SMEs also can be achieved. Based on the table, there is no CR and AVE for government intervention since the question asked during the pilot study consisting only YES/NO question that asked whether government intervention is important to the sustainable competitive advantage of the SMEs. SIM indicates as “single item measured”.

Discussion

This study is intended to test the moderating effect of government intervention by using SmartPLS software. Unfortunately, since the sample size was only 30 respondents, the result could not run as it needed since the software needs at least 50 sample size. Therefore, in this study, SmartPLS only run the significant moderation relationship on the government intervention between information management capability towards sustainable competitive advantage from CR and AVE aspects. Although the result did not project the objective of this study, but the importance of government to intervene in SMEs is still relevant.

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ACCOUNTING GRADUATES COMPETENCIES: TOWARDS THE INDUSTRY'S EXPECTATION IN THE ERA OF INDUSTRIAL REVOLUTION 4.0

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Abstract: *Industrial Revolution (IR) 4.0 has dramatically re-engineered the way of how businesses are operating. Via IR4.0, companies are now engaging with highly technological automation, data exchange, and among other things, it includes cyber-physical systems and any others so called the Internet of things. Despite of this rapid advancement in the industries, it posts a question on the readiness of graduates to embrace the challenges brought by this IR4.0. Human Capital Theory posits that, the organizations' earnings are relied upon workers' productivity that depending on their education and experience. Considering this, the study seeks to explore the expectation of the industry towards graduates' competencies and skills related to IR.4.0. The researchers aim to bridge the gap between industries and knowledge supplies by educators at higher education provider (HEP), particularly on accounting programme. As far as information technology (IT) is concerned, Accounting Information System (AIS) is one of the available accounting courses that focused on knowledge related to IT. The study conducted a quantitative analysis, by distributing 150 questionnaires to various audit firms with returned and usable questionnaires of 70. Coupled with this, researchers have also conducted semi structured interviewed with academia and industry players to add more value to the findings. Our findings reveal that, currently industry is in favour for graduates who can apply knowledge in cloud-computing, database concept and analysis, project management, business process as well as big data. This study is significant as it attempts to bridge the demand and supply of future accountants by providing basic framework to enhance existing courses/ curricular parallel with the industrial expectation. Thus, the results can be relied upon by higher institution provider to further enhance the AIS courses by embedding relevant IT competencies and skills for accounting graduates in line with in the era of IR4.0.*

Keywords: *IR 4.0, Competencies skills, Accounting Graduates, Accounting Information System (AIS).*

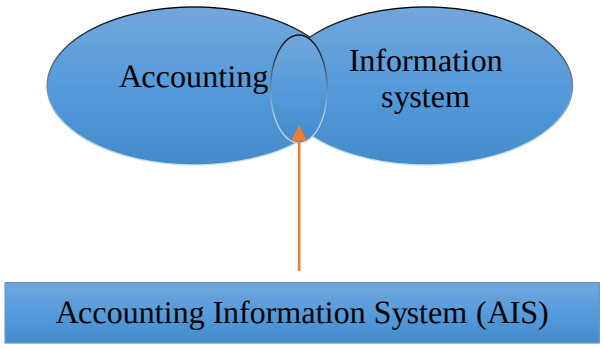
Introduction

In the era of industrial revolution 4.0 (IR 4.0) not only it posits new challenges to the industries, but it also demands higher education providers (HEPs) to produce graduates with more dynamic, highly competent and knowledgeable in vast areas related to Information Technology (IT). As IR 4.0 brings massive technological advancement to be embraced by the industrial players, the future graduates are expected to be able to cope with this ever-changing

business environment. Thus, the HEPs are now facing more pressure as producing graduates with employment-ready skills has now become the most significant and challenging (Thang & Wongsurawat, 2016). The HEPs must ensure that knowledge and skills supplied to the graduates are equivalent with the industrial expectation (A. Martensen and L. Grønholdt, 2009) and there is a continuous enhancement for graduates' competencies. This is essential to boost the graduates' employability, where concerned has been rise repeatedly on graduates' employability, emphasising on the importance roles of HEPs' in courses preparation (Robbins; 1963, Dearing; 1997, Leitch; 2006, Browne's Review; 2010).

In Malaysia, the government has set up a tone for HEPs to embed the element of IR 4.0 in teaching and learning accordingly through the Malaysia Education Blueprint (MEB) 2015-2025. This is one of the Minister of Higher Education initiatives in respond to IR 4.0. The MEB 2015-2025 provides comprehensive guideline to designing curriculars that best fits with the current industry's evolution. The aspiration of this MEB 2015-2025 is to produce individual graduate that possesses not only wide knowledge and skills, but also instilled with ethic and morality skills. In light of this, the study is motivated to examine the most relevant IT skills and knowledge in the era of IR 4.0, specifically in accounting programme. Accountant/Auditor as one of the professions which has a cross functional roles with other disciplines(Amirul, Mail, Bakar, & Ripain; 2017, Otley DT.;1980) and is highly affected by the changes in technology (Chayed, 2005).

Thus, in the aftermath of IR 4.0, it is essential to have a clearly defined IT knowledge and skills for accounting graduates which serve as a guideline for accounting education (Amirul, Mail, Bakar, & Ripain, 2017). This could bridge the gap between industrial expectation towards accounting graduate competencies with the skills and knowledge supplied by the HEPs. One of the available accounting courses that specifically related to information system and technology is the Accounting Information System (AIS) course. The following Figure 1 explains the relevant of AIS as a platform to further embrace the challenges brought by IR4.0.



Source: Bagranoff, Norman, & Simkin, (2008)

The above Figure 1 shows that AIS is a course that stands in between accounting knowledge and information system (IS). It is an interdisciplinary in nature and often characterized as spanning the fields of accounting and IS (Vatanasakdakul, 2009). Despite AIS is considered as main course for accounting graduates to know the applicability of information system and technology in accounting disciplines, nevertheless, the coverage both of IT knowledge and skills are very broad, which resulted in different focus amongst HEPs. Thus far, there are HEPs focusing on system knowledge such as programming, databases and system design and development, while others focus on internal controls and business process (Barkman 1998). In view of this, it justifies the significant of this study as the researchers aim to provide

insight on the most applicable IT knowledge and skills to be considered in designing the AIS course parallel with the IR 4.0.

Literature review

Literatures have documented that accounting graduates are expected to be well equipped with IT related skills and knowledges such as IT concepts, skills, tools, use of standard office software, specialised software applications, database and project management, etc (Amirul et. al; 2017, Cory and Pruske; 2012, Tam 2011). Additionally, the used of eXtensible Business Reporting Language (XBRL) as a platform for corporate reporting and communicating with various shareholders and stakeholders has resulted in changing the role of accountants and auditors (Dunne, Helliar, Lymer, & Mousa, 2009). Other than that, due to dramatic development in technological and internet infrastructures, most corporations are now operating their businesses on real time basis, which consequently resulted in high volume transactions and big data to be managed effectively and efficiently (citation). In relation to IR 4.0, there are some elements that need to be pondered while designing the accounting information system course, such as cloud computing, big data analytics as well as data management (National Industry 4.0 Policy Framework; 2018, Global Industry 4.0 Survey, KPMG; 2016, Industry 4.0; Deloitte 2017, Industry 4.0, PWC ;2018). The following Table 1 represents the dimensions that are available to be considered in designing the curricular for accounting information system.

Table 1 Dimensions for Accounting Information System Course

Dimensions	Details
Accounting Software	Use of MYOB, Great Plains, SAP, Oracle, Accounting software Tax return software, Electronic working papers, Time management and billing Systems, etc
Accounting System	Describe business systems, ERP, CRM, GL reporting cycle, Revenue cycle, Purchasing cycle, HR/payroll cycle
Data analysis/ Use of Audit Command Language	Data analysis and ability to use Audit Command Language
Database concepts	Discuss the database concepts
Database software	Use of database software, database search and retrieval (e.g. Access)
Documentation tools	Use of System flowcharts, Document flowcharts, Data flow diagrams
General systems knowledge	Explain transaction processing system, end-user computing
Information system auditing	Describe the Accounting and Information Systems Audit and Control
IT audit software	Use of IT audit software, CAAT
IT controls	Internal control, computer fraud, IT audit, controls to personal computers
Presentation software	Use of presentation software (e.g. Power Point / Prezi)
Process/Operational Improvement	Able to analyse for cost reduction, improve performance and business process management systems)
Project Management	Understanding and able to use project management software such as Microsoft project
Cloud Computing	Understanding and able to use cloud computing in daily

	task
XBRL	Internet financial reporting, HTML, etc
Data Management	Data dashboard, data management, data warehousing
Big data	Ability to manage big data i.e. data mining, data visualization

Source: Adopted from Amirul, S.M et al 2017

Underlying Theory

Human Capital Theory posits that organisation's performance is depending upon its employees' productivity which is significantly influenced by the employees' education and work experiences (Van House (1986). The Malaysian National IR 4.0 framework has put forward knowledge and skills as one of the key essential elements to further shape the organisation's ability to embrace the advancement and convergence with technology (NI 4.0 Policy Framework, 2018). In regard to this, the HEPs are deemed to play significant roles as education is recognised as an investment in human capital to fulfil the employers requirement. HEPs are expected to produce graduates that possess the abilities and skills which coincide with those required by their organisations (Nicolescu. L and Paun. C, 2009). for promising future job career (Amirul, S.M et al. 2017).

Research Methodology

The study has distributed a total of 150 questionnaires to managers from various background, out of which only 72 questionnaires were returned with only usable questionnaires. Apart from that, the researchers have also conducted a semi structured interview with at least 10 managers from various industries and 8 respondents which represent the academic. The sample of the studies were selected randomly for quantitative analysis, while for qualitative the researchers conducted a purposive sampling only for both academic and industry participants. The academic participants were selected from public universities who teach or have had experienced in accounting information system course, while for the industry, the study recruit the respondents from public accounting or audit firms.

Finding and Discussion

Table 2 presents the background of our respondents of which 63 percent are from the public accounting or audit firms, while the remaining of 20 percent and 17 percent are from manufacturing and financial services industries respectively.

Table 2: Respondents' Background

Factors	Frequency	Percentage
Manufacturing	12	20
Public Accounting / Audit firm	38	63
Financial services / Banking / Insurance	11	17

Table 3 shows the descriptive analysis for our questionnaire survey, where it can be seen that, 32 percent of the respondents considered accounting software and accounting systems as very important, followed by database software by 31 percent. Another important remarks is that, 62 percent of the respondents agreed that cloud computing is important for the accounting graduates, while 55% considered data management and data analysis as important.

Additionally, other dimensions such as database concept, information system auditing, IT audit software, project management and big data are also categorised as important with at least more that 40% response agreed to these. Out of 17 dimensions, presentation software can be considered as less important with 60 percent neutral response and 12 percent as not important. Besides, 30 percent of the respondent agreed that general system knowledge is not important coupled with neutral respond of 21 percent. IT control also having more than 30 percent of neutral response as well as process or operational improvement with 33 percent response. Overall, cloud computing, accounting software, accounting system, data management and data analysis can be considered as important to be included in the accounting information system course.

Table 2: Descriptive Analysis

Factors	Not Needed (%)	Not important (%)	Neutral (%)	Important (%)	Very Important (%)
Accounting Software	-	16	28	44	12
Accounting System	-	12	16	40	32
Data analysis/ Use of Audit Command Language	1	7	5	55	32
Database concepts	-	17	13	44	26
Database software	2	18	20	29	31
Documentation tools	-	23	34	21	22
General systems knowledge	6	30	21	39	4
Information system auditing	-	13	18	49	20
IT audit software	-	15	9	48	28
IT controls	4	8	37	22	29
Presentation software	-	12	60	18	10
Process/Operational Improvement	7	20	33	26	14
Project Management	-	19	21	48	12
Cloud Computing	13	7	12	62	6
XBRL	14	15	14	39	18
Data Management	9	10	11	55	15
Big data	6	19	13	44	18

The Table 4 presents our finding which is based on ranking given by 10 managers from public accounting firms, and 8 academician from public universities. Based on the results, it shows that managers rank accounting system, database concepts, cloud computing, big data and data management at the top 5 ranking. While the academicians ranked accounting system, accounting software, information auditing, database software and big data in their top 5 ranked. Both groups ranked presentation software at 17 with another top 5 last ranking which are general system knowledge, process or operational improvement, IT controls and IT audit software. When the managers were asked the basis for their ranking, 5 out of 6 managers stated that " *our ranking is equivalent to current evolution in the industry which is IR 4.0 oriented*", while 6 out of the 8 academician said that, "*the ranking is basically based on the current syllabus which are considered as relevant and parallel with the current industry requirement*".

Table 4: Ranking of Dimensions

Dimensions	Ranking	
	Practitioners	Academician
Accounting Software	14	2
Accounting System	1	1
Data analysis/ Use of Audit Command Language	7	13
Database concepts	2	9
Database software	6	4
Documentation tools	12	8
General systems knowledge	15	16
Information system auditing	9	3
IT audit software	11	12
IT controls	16	11
Presentation software	17	17
Process/Operational Improvement	13	15
Project Management	8	7
Cloud Computing	3	10
XBRL	10	14
Data Management	5	6
Big data	4	5

Based on the results presented in Table 3 and Table 4, it can be found that, through quantitative analysis, cloud computing, big data, data management and data analysis are considered as important to be considered in designing the AIS course. This finding is also supported by our qualitative analysis through interview where both groups of interviewees are also of the opinion that, cloud computing, big data, data management and data analysis to be significant to be taught by the higher education providers (HEPs). Although XBRL is argues to be important by the literatures, nevertheless our finding revealed that XBRL is not important at the time being. This could be due to the current practice in Malaysian setting where the organisations are still in the very early stage to adopt the XBRL practices. Other than that, the remaining dimension such as accounting system and software, project management and database software and concept are considered as top 10 out of 17 dimension. By looking into the Table 4, we could see how the perception between managers and academician is deviated from one another. Therefore, from this study, the differences can be bridged by having the most common IT skills and knowledge require by industries to be integrated in the AIS course design.

Conclusion, limitations and future research

This study aims to bridge the gap between industrial expectations towards accounting graduates in the era of industrial revolution 4.0 (IR 4.0) by providing insight on the most relevant skills and knowledge to be embedded within the accounting information course. Our results revealed that, other than the common IT skills and knowledge which have been documented in prior literatures, such as accounting system and software, documentation tools, project management, auditing software and tools (Amirul, S.M et al.; 2017, Cory and

Peruske; 2012, and Tam 2011), it is now important to incorporate skills and knowledge pertain to cloud computing, big data, data management and database concept parallel with the IR 4.0 (National Industry 4.0 Policy Framework; 2018, Global Industry 4.0 Survey, KPMG;2016, Industry 4.0; Deloitte 2017, Industry 4.0, PWC; 2018). Hence, this finding could be referred to by academician in preparing the AIS course syllabus. This is expected to bridge the gap between the supply and demand of future accounting graduates which would also resulted in high employability.

Nevertheless, there are some limitations of the study, which (i) the sample of companies is only 61 which might not be conclusive for generalisation. Moreover, the findings could also be regarded as an insight from the public accounting or audits firms as most of the respondents and interviewees are from this background. (ii) The study also focusing more on accounting graduates competencies, which can be broaden to other programmes to further guide the higher education providers (HEPs) in preparing the graduates in the everchanging business environment due to IR4.0. Last but least, the study also only provides descriptive analysis, where future research to be suggested is to propose a comprehensive framework for teaching the accounting information system course.

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INDIKATOR PELANCONGAN WARISAN: KAJIAN KEPUSTAKAAN

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***Abstrak**: Kajian ini mengkaji tentang mengenalpasti indikator kelestarian pelancongan warisan dan mengkaji impak kelestarian pelancongan terhadap komuniti tempatan. Pengkaji telah memilih pendekatan penyelidikan secara kuantitatif yang menggunakan metod kajian kepustakaan sama ada di peringkat antarabangsa, kebangsaan dan lokal tentang indikator pelancongan warisan. Namun sepanjang kajian dijalankan, terdapat juga kekangan untuk mendapatkan maklumat yang terperinci tentang indikator kelestarian pelancongan warisan kerana terdapat beberapa buku dan artikel atas talian tidak dapat dibuka atas privasi tertentu. Berdasarkan hasil kajian,pelancongan warisan secara umumnya merupakan satu bentuk pelancongan untuk melihat segala khazanah warisan yang telah diwarisi daripada generasi terdahulu seperti sejarah, kebudayaan, kesenian,alam semula jadi, artifak dan lain-lain. Dari segi indikator kelestarian pelancongan warisan dapat dikenalpasti dari segi budaya dan semula jadi. Dari segi impak kelestarian pelancongan terhadap komuniti tempatan pula, impak ini terbahagi kepada 3 bahagian iaitu ekonomi, sosial dan persekitaran. Kesimpulannya, Pembangunan pelancongan lestari menyokong dan dapat memastikan agar keadaan dan status ekonomi,sosial dan budaya sesebuah masyarakat yang terlibat secara langsung dan tidak langsung dengan aktiviti pelancongan berada di tahap yang baik. Pendapatan kewangan daripada pelancongan dapat menyumbang kepada peningkatan taraf hidup, keselamatan dan kestabilan sosial serta menjana lebih banyak peluang untuk pembangunan dan kebolehan berdikari atau menampung diri sendiri terutamanya bagi masyarakat setempat di sesebuah destinasi.*

***Kata Kunci:** Pelancongan, Warisan, Indikator, Kelestarian, Impak*

Pengenalan

Sektor pelancongan berkembang seiring dengan kemajuan sains dan teknologi terutamanya dalam bidang pengangkutan, telekomunikasi dan maklumat. Keadaan ini dapat dilihat dengan kehadiran pelancong dapat melancong ke mana-mana negara dengan mudah tanpa mengira orang, masa dan tempat. Kini, pelancongan sudah menjadi satu kebiasaan bagi sesetengan masyarakat dan juga dianggap sebagai sebahagian daripada keperluan yang harus dipenuhi dalam kehidupan. Dengan hal sedemikian, kebanyakkan negara sentiasa mementingkan kemajuan pelancongan dan akan menaik taraf serta mempertingkat perkhidmatan pelancongan agar mampu menarik lebih banyak pelancong ke negara mereka sekali gus meningkatkan ekonomi negara dari semasa ke semasa. (UNWTO, 2015)

Penyata yang dinyatakan oleh World Heritage Centre (2013) menunjukkan bahawa sesebuah kawasan yang mempunyai pelbagai potensi aset merupakan modal asas bagi pembangunan sektor pelancongan. Oleh hal sedemikian, pihak yang bertanggungjawab harus mengusahakan potensi tersebut agar dapat dijadikan sebagai identiti kawasan tersebut. Dengan ini pembangunan pelancongan akan lebih berarah dan mampu mengurangkan persaingan negatif antara kawasan lain dengan kawasan ini terutamanya kawasan yang mempunyai potensi sumber yang sama dengannya. (Truscott, 2013).

Terdapat beberapa indikator yang dapat mengenalpasti pelancongan warisan yang akan menjadi tarikan pelancong yang berpotensi dibangunkan dengan lebih berjaya dan lestari agar dapat dijadikan sebagai satu pendorong untuk membangunkan sektor ekonomi negara sekali gus memupuk rasa cinta tanah air dan memelihara budaya bangsa. Potensi tarikan pelancongan warisan di sesebuah kawasan akan mampu mengerakkan sektor ekonomi masyarakat setempat. Oleh itu, pelancongan warisan ini memerlukan pengurusan yang baik secara profesional, berterusan dan lestari agar dapat memberikan daya tarikan yang berterusan dan kesan positif kepada pelancong, masyarakat dan negara (Ardika, 2012).

Pelancongan warisan tidak kira dari segi budaya mahupun alam semula jadi telah mendapat perhatian yang meluas dan tinggi kerana kesedaran yang semakin meningkat tentang keperluan dan kepentingan untuk mengekalkan pelancongan warisan ini sebagai bukti sejarah masa lampau. Bukan itu sahaja, peluang ekonomi dalam sektor pelancongan warisan boleh dijalankan dengan pelbagai cara termasuklah perniagaan, lawatan sambil belajar, pemeliharaan untuk memperbaiki kehidupan masyarakat setempat dan sebagainya. Menurut Mitchell (2009) mengatakan bahawa pemeliharaan terhadap pelancongan warisan dapat dijalankan dengan profesional dengan melibatkan beberapa pihak iaitu pemegang polisi, ahli politi, pakar perdagang dan masyarakat setempat.

Oleh itu, pelancongan warisan merupakan satu pelancongan yang akan membawa banyak manfaat kepada pelbagai pihak dan ekonomi negara. Dengan hal ini pelancongan warisan harus dikenalpasti dan dikekalkan serta dipelihara dengan baik dan lestari agar dapat terus membawa impak yang positif kepada kita dan dinikmati oleh generasi yang akan datang nanti.

Kajian Lepas

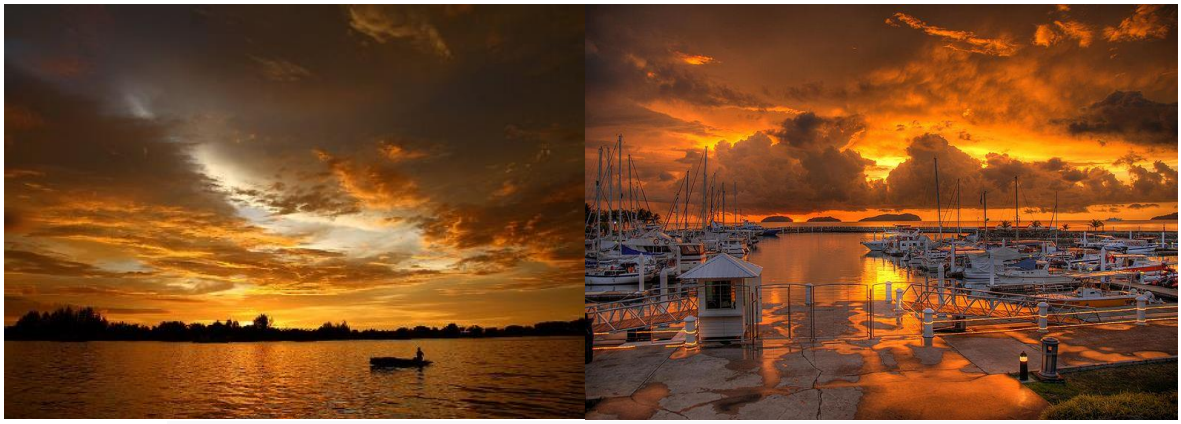
Bil	Penulis	Hasil Kajian
1.	Goeldner dan McIntosh (2006)	Pelancongan boleh ditakrifkan sebagai satu sains, seni dan urusan yang berkaitan dengan pelawat, menyediakan kemudahan pengangkutan dan penginapan, seterusnya melayan keperluan dan kehendak mereka. Pelancongan selalunya melibatkan seseorang atau sekumpulan individu yang melawat atau berkunjung ke sesuatu tempat khusus untuk meninjau dan menikmati keindahan kawasan berkenaan, melawat rakan taulan dan saudara-mara dan untuk bercuti. Pelancongan turut melibatkan seseorang dengan pelbagai urusan sebagai tujuan utama keluar dari tempat kediaman asal mereka buat sementara waktu, contohnya untuk tujuan persidangan, perniagaan ataupun melanjutkan pelajaran.

2.	Goeldner dan Ritchie (2006)	Pelancongan adalah seperti berikut :- *...is a composite of activities, services and industries that deliver a travel experience: transporation, accamodations, eating and drinking establishments, shops, entertainment, activity facilites and other hospitality services available for individuals and groups that are traveling away from home.*
3.	Zbignew (1995)	Pelancongan merupakan sektor ekonomi yang menawarkan produk paling bernilai, iaitu alam semula jadi. Aset ini merupakan khazanah semula jadi dan warisan yang tidak ternilai harganya. Secara umumnya, pelancongan dalam konteks ini melibatkan pengalaman aktiviti luar merangkumi pelbagai aktiviti, dari hanya aktiviti pelancongan pasif seperti berjalan kaki menikmati pemandangan hutan atau pelancongan yang bersifat pengalaman pengembaraan, sehinggalah kepada pelancongan yang berbentuk pemerhatian seperti memandu sambil menikmati pemandangan di pantai dan memerhati hidupan liar.
4.	Ko dan Stewart (2002), Kuvan & Akan (2005), Shukor et al. (2014), AlmeidaGarcía et al. (2016)	Pembangunan pelancongan mengambilkira faktor ekonomi, sosial dan budaya komuniti tempatan serta alam sekitar sebagai penentu pembangunan. Faktor-faktor ini mempunyai kesan rantaian antara satu sama lain. Sekiranya pembangunan pelancongan hanya memberi penekanan kepada faktor ekonomi sahaja tanpa mengambilkira kesan kepada alam sekitar, maka pembangunan yang dijalankan adalah tidak lestari.
5.	Godfrey (1998)	Kelestarian pembangunan adalah memelihara persekitaran alam sekitar dan pada masa memperoleh industri pelancongan yang sihat.
6.	Ko dan Stewart (2002)	Pembangunan pelancongan dapat membuka peluang pekerjaan kepada komuniti tempatan. Kajian mereka disokong oleh hasil kajian oleh Deng et al. (2016). Penjanaan peluang pekerjaan menjana sumber pendapatan yang menyumbang kepada peningkatan taraf hidup mereka sebagaimana dapatan kajian oleh Látková dan Vogt (2012) dan Upchurch dan Teivane (2000).

Metodologi Kajian

(a) Lokasi Kajian

Kota Kinabalu terletak di pantai barat Sabah. Bandar ini terletak di dataran yang sempit di antara Banjaran Crocker ke timur dan Laut China Selatan ke barat. Terdapat enam pulau di luar pantai bandar. Yang terbesar ialah Pulau Gaya yang merupakan bekas tapak penempatan British yang pertama. Kira-kira 8,000 orang tinggal di sana. Pulau-pulau kecil yang tidak berpenghuni, antaranya Pulau Manukan, Pulau Mamutik, Pulau Sapi, Pulau Suluk dan Pulau Sepanggar, terletak di utara bertentangan dengan Taman Negara Teluk Sepanggar.
Tanah rata tertumpu di pusat bandar, dan terdapat had yang ketat untuk ketinggian bangunan: lapangan terbang terletak 7 km (4 mi) dari bandar dan kawasan bandar berada secara langsung dalam laluan penerbangan. Kebanyakan kawasan Daerah Pusat Perniagaan (Central Business District, (CBD)) hari ini dibina di atas tanah yang ditambak dari laut. Kehidupan tumbuhan asal kebanyakannya sudah hilang, tetapi beberapa bukit di dalam bandar (terlalu curam untuk dibina bangunan) masih dilitupi dengan hutan hujan tropika. Salah satu daripadanya ialah Signal Hill, yang berbatasan dengan CBD arah ke pantai. Di kawasan Teluk Likas, saki-baki hutan bakau yang luas sudah hampir hilang. Pada tahun 1996, kerajaan negeri telah mengisytiharkan 24 ekar (97,000 m2) hutan sebagai kawasan yang dilindungi. Hutan ini kini dikenali sebagai Kota Kinabalu Wetlands. Tempat perlindungan itu diberikan perlindungan tambahan sebagai Tapak Warisan Budaya Negeri pada tahun 1998.



Rajah 1.0 : Pemandangan matahari terbenam di Kota Kinabalu.

Lima pulau (Gaya, Sapi, Manukan, Sulug, Mamutik) yang berhadapan dengan bandar dipelihara sebagai Taman Negara Tunku Abdul Rahman. Taman ini dinamakan sempena nama Perdana Menteri Malaysia yang pertama, iaitu Tunku Abdul Rahman. Ia merupakan tempat rekreasi popular bagi pelancong dan penduduk tempatan. Pusat bandar Kota Kinabalu kebanyakannya merupakan kawasan perniagaan dan pentadbiran kerajaan yang termasuk Karamunsing, kawasan pelabuhan (Tanjung Lipat), Signal Hill, Kampung Air, Sinsuran, Segama, Asia City, Gaya Street (Bandar Lama), Bandaran Berjaya, Api-Api, Sutera Harbour dan Sembulan. Kawasan kejiranan dan pinggir bandar kediaman termasuk Kepayan Ridge, Tanjung Aru, Petagas, Kepayan, Lido, Lintas, Nosoob, Bukit Padang, Luyang, Damai, Likas dan Kolombong. Bandar ini semakin berkembang sehingga menjangkau ke pekan Inanam, Menggatal, Sepanggar, Telipok dan selatan sempadan daerah Penampang, Putatan, dan Lok Kawi. Kota Kinabalu umumnya berada jauh dari pusat pemerintahan utama negara, ia terletak kira-kira 1,624 kilometer (1,009 mi) dari Kuala Lumpur yang berada di Semenanjung Malaysia dan juga 804 kilometer (500 mi) dari Kuching, ibu negeri jirannya iaitu Sarawak.

Rajah 2.0 : Penempatan bangsa Moro di Pulau Gaya.

(b) Kajian Kepustakaan

Dalam kajian ini, pengkaji telah mencari bahan rujukan yang berkaitan dengan tajuk kahian. Berdasarkan tajuk kajian, penyelidikan memerlukan bahan-bahan rujukan dari pelbagai bidang seperti pelancongan, geografi, pendudukan dan sebagainya. Jadi, kesemua perkara-perkara yang disebut di atas perlu dicari oleh pengkaji untuk mendapatkan maklumat tentang kajian ini.

Selain itu, kajian lepas juga perlu diteliti oleh pengkaji bagi menyokong tajuk kajian dan dijadikan sebagai sumber rujukan. Kajian-kajian lepas itu penting bagi menunjukkan bahawa kajian ini tidak mengulangi kajian lepas yang telah dibuat oleh pengkaji lain. Bukan itu sahaja, ia juga bertujuan bagi menghargai penulisan ilmiah para cendekiawan dalam bidang yang sama dengan kajian ini. Kebanyakan kajian lepas itu diambil ndaripada kajian yang telah dilaksanakan dalam negara dan beberapa kajian lagi diambil dari luar negara seperti Indonesia.

Selepas bahan rujukan yang diperlukan telah dicari dan dijumpai, pengkaji akan membaca dan meneliti setiap maklumat yang sedia ada dalam rujukan tersebut. Maklumat uang berkaitan dan bersesuaian dengan tajuk kajian akan digunakan oleh pengkaji dalam kajian baru. Antara maklumat yang diambil oleh pengkaji adalah maklumat berkaitan dengan pelancongan, indikator kelestarian, pelancongan warisan, impak pelancongan warisan terhadap komuniti setempat, sejarah di kawasan kajian iaitu Kota Kinabalu, Sabah dan sebagainya.

Hasil Kajian

(a) Konsep Dan Petunjuk Pelancongan Warisan

Dalam konteks alam sekitar, pelancongan bukan sahaja membawa kesan positif malah impak negatif bergantung kepada cara pengurusan pembangunan tersebut dirancang, dipantau dan dikawal. Pembangunan dan pengurusan pelancong yang tidak mengikut prosedur yang ditetapkan dan kurang sesuai akan menyebabkan kemusnahan habitat dan lanskap, menghapuskan sumber-sumber semula jadi dan membawa kesan yang serius kepada alam sekitar terutamanya pengurusan sampah yang tidak sistematik.

Dengan hal sedemikian, pendekatan pembangunan lestari bagi setiap perancangan pelancongan adalah diperlukan kerana sekiranya sumber ini dimusnahkan, maka kawasan pelancongan ini tidak dapat dijadikan sebagai tarikan kedatangan pengunjung lagi dan sekali gus akan tersisih dan terbiar begitu sahaja. Bagi merealisasikan konsep ini, petunjuk atau indikator tahap kelestarian harus dikenal pasti dan diguna pakai sebagi alat pengukuran kelestarian pelancongan warisan. Menurut Sham Sani (2001), indikator merupakan pengukuran sesuatu kriteria dan digunakan bagi dua tujuan utama iaitu mengkuantifikasikan

maklumat bagi menjelaskan secara terperinci dan meringkaskan maklumat tentang sesuatu keadaan yang kompleks agar dapat difahami dengan mudah.

Petunjuk lestari adalah untuk mengukur perubahan, mengenal pasti proses dan menyediakan rangka kerja untuk tatacara sasaran dan prestasi pemantauan (Crabtree dan Bayfield, 1998). Pentunjuk ini menyediakan kaedah untuk mencartakan kemajuan ke arah kepentingan matlamat agar dapat mencapai bentuk pembangunan tang seumbang dalam bidang sosial, ekonomi dan alam sekitar dan dijadikan sebagai objektif utama pembangunan lestari sesebuah negara. Jadual 1 menunjukkan indikator kelestarian dalam pelancongan warisan menurut Dymond (1997).

Jadual 1 : Indikator Kelestarian Pelancongan Warisan

Indikator	Perincian Ukuran	Bidang Petunjuk
1. Penjagaan tapak	Kategori penjagaan tapak yang mengikuti indeks "International Union for the Conservation of Nature and Natural Resources (IUCN)	Ekologi
2. Tekanan	Jumlah pelancong ke lokasi (tahunan & bulanan)	Ekologi
3. Kegunaan intensif	Kegunaan secara intensif pada tempoh tertinggi (jumlah pelawat per hektar)	Ekologi
4. Pengurusan bahan buangan	Peratusan bahan buangan yang dihantar ke tapak pelupusan (Petunjuk tambahan seperti bekalan air boleh juga digunakan)	Ekologi
5. Ekosistem yang kritikal	Jumlah spesies yang unik, lupus dan bakal lupus di kawasan	Ekologi
6. Impak sosial	Nisbah jumlah pelancong dengan penduduk tempatan (semasa tempoh tertinggi dan tempoh selepasnya)	Sosial
7. Kepuasan penduduk tempatan	Tahap kepuasan yang diluahkan oleh penduduk tempatan (menggunakan bancian soal-selidik)	Ekonomi
8. Kawalan pembangunan	Menggunakan prosedur rujukan persekitaran atau kawalan formal terhadap pembangunan pada tapak dan kepadatan.	Perancangan
9. Proses perancangan	Menggunakan pelan perancangan wilayah yang telah dirancang untuk kawasan termasuk perancangan pelancongan	Perancangan
10. Kepuasan pengguna (pelancong)	Tahap kepuasan yang diluahkan oleh pelancong (menggunakan bancian soal selidik)	Ekonomi
11. Sumbangan	Bahagian sumbangan daripada jumlah keseluruhan ekonomi yang diperoleh dari	Ekonomi

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kepada ekonomi tempatan	sektor pelancongan	

Sumber: Dymond (1997).

(b) **Impak Pelancongan Warisan terhadap Komuniti Setempat**

Jadual 2 : Impak Pelancongan Warisan terhadap Komuniti Setempat

Impak (Ekonomi)	Boleh memberikan peluang kerja.
	Dapat menambah pendapatan sampingan keluarga
	Meningkatkan taraf hidup penduduk tempatan di kampung
	Hasil pendapatan yang dijana boleh menyumbang kepada pembangunan kampung.
	Menggalakkan kepelbagaian aktiviti ekonomi (kedai runcit dan cenderamata).
	Meningkatkan kuasa beli dan menyebabkan kualiti hidup yang lebih baik.
	Membasmi kemiskinan dalam kalangan penduduk di kampung.
	Meningkatkan peluang kemahiran dan pengetahuan individu.
	Meningkatkan tahap kecekapan pengurusan
Impak (Sosial)	Meningkatkan kemahiran berkomunikasi
	Meningkatkan keselamatan kawasan.
	Mengurangkan jenayah dan gejala sosial kawasan kampung
Impak (Budaya)	Gaya hidup masyarakat tempatan dikekalkan.
	Identiti/ adat resam sebuah keluarga diperturunkan melalui proses sosialisasi
	Budaya tempatan dikomersialkan bagi memenuhi permintaan pelancong.
	Membangunkan kumpulan kebudayaan
	Mewujudkan masyarakat cintakan budaya.
	Mengetahui budaya luar.
	Meningkatkan kesedaran budaya tempatan dalam kalangan penduduk
	Mengekalkan rumah tradisional tempatan
	Mengekalkan sukan tradisional/rakyat masyarakat tempatan.
	Pemuliharaan kawasan sejarah
	Memelihara identiti budaya masyarakat.

Impak Alam Sekitar	Menggalakkan pemuliharaan alam semula jadi
	Meningkatkan imej dan pemandangan kampung.
	Meningkatkan tahap kebersihan kawasan kampung
	Menggalakkan aktiviti kitar semula
	Melindungi hidupan liar seperti spesis burung migrasi.
	Membangunkan lebih banyak taman laut dan kawasan rekreasi
Kesan Keseluruhan Impak	Secara keseluruhan memberi manfaat ekonomi kepada masyarakat setempat
	Secara keseluruhan, memberi manfaat sosial kepada masyarakat setempat.
	Secara keseluruhan, dapat mempelbagaikan dan memelihara aktiviti kebudayaan tempatan
	Secara keseluruhan, aktiviti Kota Kinabalu meningkatkan kualiti alam sekitar

Kesimpulan

Malaysia merupakan satu negara yang beruntung kerana terdapat beberapa tapak warisan budaya atau semula jadi telah diiktiraf oleh UNESCO sebagai tapak warisan dunia. Ramai pelanconga telah ditarik datang ke Malaysia kesan daripada pengiktirafan ini kerana ingin menikmati keindahan alam serta kepelbagaian budaya dan adat resam yang diamalkan oleh masyarakat Malaysia. Produk pelancong sedia ada yang ditawarkan kepada pelancong akan menjadikan potensi yang tinggi untuk meningkatkan industri pelancongan warisan. Jabatan Warisan Negara sepatutnya mempromosikan pelancongan warisan negara Malaysia di peringkat kebangsaan dan antarabangsa agar dapat dikenali oleh orang ramai. Namun, terdapat cabaran yang harus dihadapi sama ada sektor awam ataupun swasta termasuk memberi khidmat pendidikan kepada masyarakat ataupun pelancong dalam aspek pendidikan warisan dan alam sekitar. Oleh itu, setiap pihak harus bekerjasama termasuk pihak Badan Bukan Kerajaan (NGO) dan universiti tempatan agar mampu mewujudkan pembangunan pelancongan warisan yang lestari.

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STATUS KUALITI UDARA DI BEBERAPA KAWASAN LUAR BANDAR TERPILIH DI NEGERI JOHOR

THE STATUS OF AIR QUALITY IN SOME AREAS SELECTED IN JOHOR

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[1 2 3 4] Jabatan Pengurusan Pembinaan
[5]Jabatan Pengurusan Harta Tanah

Abstrak: *Pembangunan pesat yang turut melimpah ke kawasan luar bandar telah menyebabkan kawasan luar bandar di Negeri Johor tidak terkecuali menunjukkan kemerosotan kualiti udara akibat daripada pembangunan. Kawasan kajian ialah di Kampung Paya Pulai, Segamat; Parit Raja, Batu Pahat; Kampung Sri Bahagia, Mersing dan Kampung Pok dan Johor Bahru. Persampelan kualiti udara bagi kajian ini adalah bagi gas pencemar* SO_2, NO_2, *CO,* O_3 *dan* PM^{10} *yang memerlukan persampelan selama satu jam. Gas-gas seperti* SO_2, NO_2 *dan* CO_2 *dilihat nilai kepekatan kandungan gas dalam udara menerusi alat persampelan kualiti udara YESAIR Model #6000. Manakala persampelan* O_3 *menerusi alat Ozone Detector. Kedua-dua alat ini adalah mudah alih dan nilai bacaan terus diperolehi selepas cerapan dilakukan di lokasi persampelan kawasan kajian. Manakala* PM^{10} *pula, sampel udara dikumpul menggunakan alat persampel udara E-Sampler Model G2142. Data yang direkodkan akan dipindahkan ke komputer menggunakan aplikasi Terminal Utility Software (TUS) untuk dianalisis. Pencerapan udara telah dijalankan sebanyak tiga kali sehari iaitu pada waktu pagi, tengahari dan malam. Persampelan kualiti udara dilakukan pada dua hari yang berbeza iaitu hari bekerja di Johor (Isnin-Jumaat) dan tidak bekerja (Sabtu & Ahad). Manakala bagi gas pencemar* PM^{10} *ditentukan dalam tempoh masa 24 jam. Penentuan kualiti udara dirujuk/berpandukan kepada Piawaian Kualiti udara Persekitaran Malaysia, yang dikeluarkan oleh Jabatan Alam sekitar (JAS). Hasil kajian menunjukkan berlaku pencemaran di semua kawasan luar bandar di Negeri Johor. Gas* SO_2, *dan* NO_2 *menunjukkan bacaan tertinggi adalah di Parit Raja dengan masing-masing bacaan* SO_2 *pagi 0.011, tengahari 0.024 dan malam 0.008 ppm, manakala* NO_2 *pada bacaan pagi 0.009, tengahari 0.011 dan malam 0.005 ppm. Gas utama yang menyumbang kepada pencemaran udara adalah* PM^{10}, *CO dan* O_3 *di semua kawasan kajian. IPU secara puratanya kurang dari bacaan 50 masih lagi dikategorikan sebagai 'sihat'. Hanya satu stesen yang mencatatkan nilai 'sederhana' iaitu di Kampung Paya Pulai, Segamat yang disumbangkan oleh kepekatan* PM^{10}. *Diharapkan kajian ini akan menjadi panduan kepada masyarakat dan pihak yang berkepentingan dalam membangunkan kawasan luar bandar dan perlunya mengekalkan kualiti udara di kawasan luar bandar.*

Kata kunci: *Kawasan luar bandar, pencemaran udara, Indeks Pencemaran Udara (IPU)*

Abstract *:The rapid development that spill over into rural areas has resulted in rural areas in the State of Johor is no exception showed deterioration of air quality as a result of development. The study area was in Kampung Paya Pulai, Segamat; Parit Raja, Batu Pahat; Kampung Sri Bahagia, Mersing and Kampung Pok and Johor Bahru. Air quality sampling for this study is for gas pollutant SO_2, NO_2, CO, O_3 and PM^{10} which requires sampling for one hour. Gases such as SO_2, NO_2 and CO_2 content gas concentration values are seen in air through air quality sampling tool YESAIR Model #6000. While sampling the Ozone O_3 through the tool Detector. These two tools are portable and direct reading of values obtained after the observations made on site sampling study area. While PM^{10}, the air samples are collected using the tool persampel air G2142 Model E-Sampler. Recorded Data will be transferred to the computer using Terminal Utility Software (TUS) to analyzed. Air observation was carried out three times a day, in the morning, noon and night. Air quality sampling performed on two different days which are business days in Johor (Monday-Friday) and not working (Saturday & Sunday). While for pollutants PM^{10} is determined within the last 24 hours. Determination of air quality based on the Standards referenced/air quality environment in Malaysia, issued by the Department of environment (DOE). The results showed pollution occurs in all rural areas in the State of Johor. Gas SO_2, and NO.2 shows the highest reading was in Parit Raja with each recitation of SO_2 am 0.011 0.024 noon and night, 0.008 ppm, while NO.2 at reading in the morning, noon and 0.009 0.011 night 0.005 ppm. The main gas contributing to air pollution is PM10, CO and O_3 in all areas the study.. API on average less than 50 reading still categorized as ' healthy '. Only one station that recorded the value of the ' medium ' in Kampung Paya Pulai, Segamat contributed by concentration of PM^{10}. It is hoped that this study will serve as a guide to community and stakeholders in the development of rural areas and the need to maintain air quality in rural areas.*

Keywords: *Rural areas, air pollution, Air Pollution Index (API).*

Pengenalan

Di Malaysia prestasi pembangunan ekonomi dipacu oleh pelbagai pelan pembangunan, dan terkini oleh plan transforrmasi telah dilancarkan oleh Perdana Menteri Malaysia pada tahun 2017 yang dikenali sebagai Transformasi Nasional (TN50 [2021-2050]. Perkembangan yang positif dalam pelbagai bidang telah mencorak keadaan ekonomi yang berdaya saing dan melibatkan skala yang lebih besar iaitu ekonomi kawasan luar bandar itu sendiri (Beck. Et. al. 2005).Pembangunan pesat yang turut melimpah ke kawasan luar bandar telah menyebabkan kawasan ini tidak terkecuali menerima kesan pencemaran alam sekitar seperti pencemaran udara. Kajian oleh *Asian Development Bank* (ADB), menyatakan ekonomi luar bandar di Asia semakin seiring dengan ekonomi dunia yang pesat, yang mana masyarakatnya berdepan dengan peluang baru serta pelbagai cabaran (Bloom, Craig & Malaney, 2001). Antara peluang adalah kenaikan tingkat pendapatan masyarakat yang mengurangkan kadar kemiskinan luar bandar dan secara langsung berlaku peningkatan dalam kualiti hidup. Di sebalik peluang yang diperolehi, pelbagai cabaran menggugat kestabilan status kualiti hidup masyarakat luar bandar seperti isu berkenaan alam sekitar, perpecahan nilai-nilai tradisional, peningkatan masalah sosial, ancaman kesihatan dan isu pentadbiran.

Di Malaysia, masalah pencemaran udara mula dirasakan sejak tahun 1970-an lagi apabila berkembangnya proses urbanisasi dan perindustrian (Hashim & Suhaily, 2005). Berdasarkan kajian Abdul Rahim et al., (2012), pembangunan dan suntikan modal untuk

pembangunan bandar kecil Tanjong Malim salah satunya telah mempengaruhi perkembangan landskap infrastruktur seperti kemudahan jalan raya. Namun demikian, perkembangan dari segi penaiktarafan jalan raya menyebabkan timbul masalah kebisingan trafik. Melalui kajian tersebut, terdapat sesetengah kawasan di bandar kecil tersebut menunjukkan aras kebisingan trafik melebihi piawaian yang ditetapkan oleh Jabatan Alam Sekitar iaitu 65 dBA pada waktu siang dan 55 dBA pada waktu malam. Kesan pembangunan yang semakin pesat adalah faktor yang dikenal pasti sebagai penyumbang kepada peningkatan jumlah kenderaan di Tanjong Malim dan seterusnya mewujudkan masalah ini. Keadaan ini sekiranya dibiarkan, mampu menganggu kualiti hidup masyarakat di bandar kecil Tanjong Malim.

Di Malaysia, masalah pencemaran alam sekitar bandar sering berlaku dilaporkan melalui kajian-kajian yang dijalankan oleh jabatan kerajaan berkaitan seperti Jabatan Alam Sekitar melalui laporan tahunannya (1986, 1987, 1988, 1989, 1990, 1991, 1992, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2002, 2004, 2005 dan 2006) serta kumpulan penyelidik dalam kalangan ahli akademik dan Pertubuhan Bukan Kerajaan (NGO) (Haliza Abd Rahman 2016).

Rostam et al., (2006), dalam kajiannya di bandar kecil Kemaman, Terengganu, menyatakan transformasi pesat akibat perkembangan ekonomi menyebabkan peningkatan taraf hidup masyarakat setempat kerana bertambah baiknya kemudahan sosial, infrastruktur dan ekonomi isi rumah. Walaupun begitu, kualiti persekitaran fizikal kawasan tersebut telah mengalami kemerosotan dari segi kualiti udara, kualiti air serta perubahan dari aspek keselasaan termal.

Kebanyakkan kajian sebelum ini banyak menyentuh berkenaan kemerosotan kualiti udara di kawasan bandar. Sebagai contoh, bandar-bandar besar di Malaysia seperti Kuala Lumpur, Johor Bharu, Pulau Pinang dan Seremban menunjukkan pergantungan yang tinggi penduduk kepada kenderaan persendirian seperti motosikal dan kereta akan memberi implikasi yang negatif terhadap penggunaan sumber tenaga, umpamanya fosil yang dibakar oleh enjin kenderaan yang boleh meningkatkan pencemaran udara (Haryati Shafii 2011).Walau bagaimanapun, kajian yang menyentuh berkenaan kualiti udara di kawasan luar bandar agak sedikit dan hanyalah tertumpu kepada bandar kecil, seperti kajian Katiman Rostam et.al (2006), dan bandar kecil Tajong Malim oleh Abd Rahim Md. Nor et. al (2012). Justeru, kajian ini melihat kupasan berkaitan kualiti udara di kawasan luar bandar dalam penulisan ini, merupakan tepat pada masanya dan merupakan satu kajian yang mengisi kelompangan kajian kualiti udara terutamanya di kawasan luar bandar di Malaysia.

Transformasi pembangunan dan ekonomi bukan sahaja menuntut pembangunan ekonomi, bahkan turut melibatkan pembangunan fizikal di sesebuah kawasan. Perubahan tersebut dipengaruhi oleh beberapa faktor iaitu perubahan pola guna tanah, iaitu dari kawasan pertanian kepada kawasan perumahan dan komersil, penebangan pokok, pembersihan kawasan dan penimbusan kawasan berpaya. Pembangunan bukan sahaja memberi impak positif iaitu membawa kemajuan kepada sesebuah kawasan, terutamanya kawasan luar bandar, bahkan turut memberi impak negatif terutamanya kepada alam sekitar dan persekitaran. Justeru, penulisan ini akan mengupas status kualiti udara di kawasan luar bandar yang terpilih di Negeri Johor yang dilihat memberi kesan yang signifikan kepada penduduk akibat daripada aktiviti pembangunan dan ekonomi.

Pencemaran Udara

Secara umumnya, punca pencemaran udara di Malaysia disumbangkan oleh tiga faktor utama iaitu dari kenderaan, industri dan pembakaran. Oleh itu, menurut Jabatan Alam Sekitar Malaysia (JAS) (2015), kualiti udara di negara ini perlu dipantau secara berterusan dan secara manual bagi mengesan sebarang perubahan dalam status kualiti udara yang boleh memberi kemudaratan kepada kesihatan manusia dan alam sekitar.

Indeks Pencemaran Udara (IPU) adalah satu penunjuk yang boleh menggambarkan status kualiti udara. Nilai IPU adalah berdasarkan kepada kepekatan purata setiap gas pencemar udara iaitu sulfur dioksida (SO2), nitrogen dioksida (NO2), karbon monoksida (CO), ozon (O3) dan partikel zarah halus/habuk (PM10). Pencemar udara yang dominan dengan kepekatan tertinggi diambil kira sebagai pencemar yang akan menentukan nilai IPU. IPU adalah nilai indeks yang paling maksimum di antara nilai-nilai indeks setiap parameter yang digelar sub-indeks.

Pencemaran udara ditaktifkan sebagai perubahan yang berlaku kepada udara akibat kehadiran bahan atau komponen asing yang merubah keadaan dan kualiti udara tersebut sehingga menjejaskan fungsinya serta memudaratkan kesihatan manusia, dan hidupan lain serta boleh menjejaskan alam sekitar (Glossary of Meterology) (Rapeah Suppian 2011). Selain itu, pencemaran udara bukan sahaja boleh memudaratkan kesihatan, bahkan apabila keadaan semakin kritikal boleh menjejaskan alam sekitar dan harta benda, contohnya jerebu.

Pencemaran udara boleh mengakibatkan gangguan terhadap saluran pernafasan dan paru-paru. *Emphysema, asthma, chronic bronchitis*, dan juga kanser paru-paru merupakan bukti pencemaran udara boleh mengakibatkan pembekakkan radang, salur pernafasan mengecil, penyakit paru-paru dan pesakit akan mengalami kesukaran bernafas (Jamaluddin Md. Jahi et.al 2011). Pencemaran udara juga boleh mengakibatkan pesakit yang telah sedia ada “penyakit berkaitan paru-paru” akan bertambah kronik.

Kajian oleh Awang dan Sutan Sidi (1999)(Haryati Shafii & Nursyikin Miskam 2017), menyatakan masalah pencemaran udara telah meningkat dari tahun 1997 berbanding tahun 1990 yang berpunca daripada pertambahan bilangan kenderaan bermotor, industri, perubahan guna tanah dan urbanisasi.

Laporan daripada Menteri pengangkutan di Kota Makassar, Indonesia pula, menunjukkan setiap tahun berlaku pertambahan jumlah kenderaan di Makassar dengan peningkatan antara 2-5%. Daripada Januari 2014 misalnya, jumlah kenderaan iaitu motorsikal dan kereta adalah berjumlah lapan ribu hingga sepuluh ribu, iaitu mencapai 70% untuk kenderaan peribadi sedangkan kenderaan umum adalah 30% (Dinas perhubungan 2014). Dengan pertambahan kenderaan bermotor ini turut menyumbang kepada peningkatan pencemaran udara di kota Makassar.

Kawasan Kajian

Dalam kajian ini, kawasan kajian yang dipilih adalah terletak di negeri Johor. Disebabkan negeri Johor mempunyai liputan yang luas dengan lapan buah daerah (Rajah 1), maka skop pemilihan kawasan kajian hanya tertumpu kepada empat bahagian negeri ini yang terletak di kedudukan utara, timur, barat dan selatan negeri Johor.

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Rajah 1 : Kawasan kajian yang yang terletak di Daerah Mersing, Johor Bharu, Batu Pahat dan Segamat

Sumber: Majlis Daerah Batu Pahat 2011

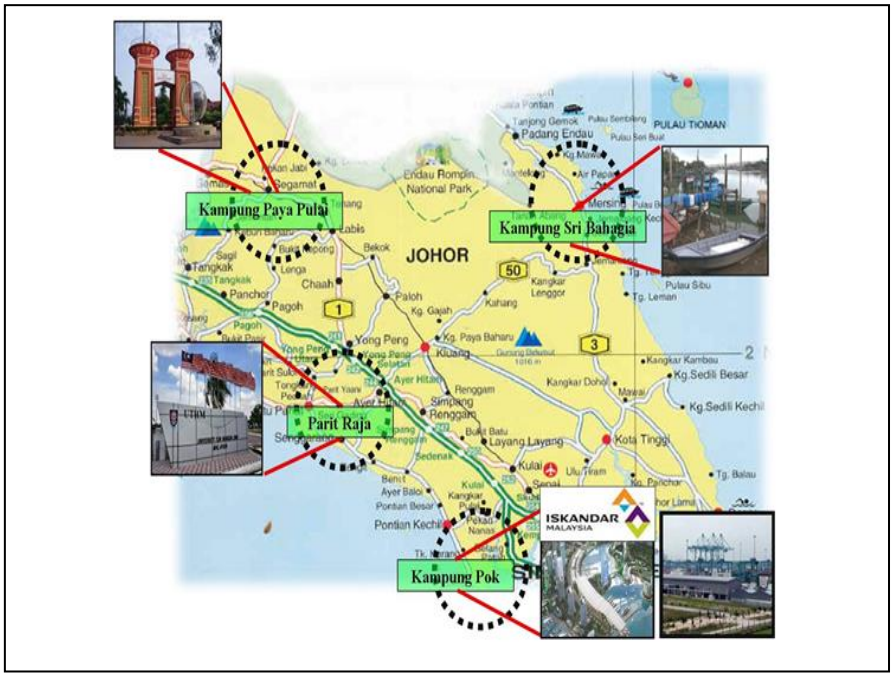
Nota: Kawasan Kajian= *Timur (diwakili Mersing), Selatan (diwakili Johor Bharu), Barat (diwakili Batu Pahat) & Utara (diwakili Segamat)*

Pemilihan setiap kawasan kajian tersebut adalah berdasarkan kepada beberapa kriteria seperti lokasi, dasar dan perancangan serta proses pembangunan yang berlaku di setiap kawasan kajian tersebut. Secara terperinci, kawasan kajian mengikut lokasi dan koordinat boleh dirujuk pada jadual 1 dan Rajah 2.

Jadual 1: Lokasi empat kawasan kajian mengikut daerah dan koordinat

Daerah	Lokasi kajian	Koordinat
Segamat	Kampung Paya Pulai	U2º29′47.24″ T102º49′2.82″
Batu Pahat	Parit Raja	U1º51′45″ T103º6′25″
Mersing	Kampung Sri Bahagia	U2º26′0″ T103º50′0″
Johor Bahru	Kampung Pok	T1º21′47″ U103º35′13″

Sumber: Majlis Daerah Batu Pahat 2011



Rajah 2: Lokasi kawasan kajian mengikut daerah di Negeri Johor
Sumber: Majlis Daerah Batu Pahat 2011

Metodologi Penyleidikan

Kerja lapangan: Kajian pengukuran

Kerja lapangan melibatkan beberapa siri pengukuran yang dilakukan untuk mendapatkan status kualiti udara bagi kawasan kajian terpilih. Persampelan dilakukan di stesen yang telah ditetapkan oleh penyelidik mengikut tujuan dan keperluan kajian.

Persampelan udara/ Pencerapan kualiti udara

Dalam kajian ini, sebanyak lima jenis gas pencemar udara utama yang disenaraikan oleh Jabatan Alam Sekitar Malaysia (JAS) dicerap dan dianalisis bagi mendapatkan nilai Indeks Pencemaran Udara (IPU) merangkumi sulfur dioksida (SO_2), nitrogen dioksida (NO_2), karbon monoksida (CO_2), ozon (O_3) dan partikel zarah halus berdiameter 10 mikron (PM^{10}).

Gas-gas seperti SO_2, NO_2 dan CO_2 dilihat nilai kepekatan kandungan gas dalam udara menerusi alat persampelan kualiti udara YESAIR Model #6000. Manakala persampelan O3 menerusi alat Ozone Detector. Kedua-dua alat ini adalah mudah alih dan nilai bacaan terus diperolehi selepas cerapan dilakukan di lokasi persampelan kawasan kajian. Bagi PM^{10} pula, sampel udara dikumpul menggunakan alat persampel udara E-Sampler Model G2142. Foto 1 merupakan salah satu stesen persampelan udara menggunakan alat E-Sampler Model G2142.

Alat E-Sampler menggunakan teknologi yang menggabungkan dua ukuran masa nyata dengan ketepatan piawaian kaedah penapis kertas turas yang mana kepekatan zarah halus terus direkod di dalam alat ini tanpa perlu menimbang jisim kertas turas sebelum dan selepas persampelan data. Data yang direkod tersebut kemudiannya dipindah ke komputer menggunakan aplikasi *Terminal Utility Software* (*TUS*) untuk dianalisis.

Foto 1: Contoh kaedah persampelan udara menggunakan alat *E-sampler* di stesen Kampung Pok, Johor Bahru

Sumber: Kerja lapangan 2015

Persampelan kepekatan kesemua gas ini berpandukan kepada urutan kerja yang ditetapkan. Berdasarkan kepada keperluan Piawaian Kualiti Udara Persekitaran Malaysia (MAAQS) (Jadual 2), bahan pencemar yang terlibat perlu diukur pada purata masa yang berbeza-beza seperti yang diperuntukkan oleh *World Health Organization* (2005). Purata masa yang diambil adalah dari 1 hingga 24 jam untuk gas pencemar yang berbeza. Tempoh ini menggambarkan masa di mana kesan kesihatan terjejas disebabkan gas cemar tertentu. Persampelan kualiti udara turut dilakukan pada dua hari berbeza iaitu pada hari bekerja (Isnin- Jumaat) dan hari tidak bekerja (Sabtu & Ahad), mengikut negeri Johor. Jadual 2 menunjukkan Piawaian Kualiti Udara Persekitaran Malaysia yang dikeluarkan oleh Jabatan Alam Sekitar Malaysia (2015), yang menjadi sumber rujukan utama bagi penentuan nilai kualiti udara bagi penyelidikan ini.

Jadual 2: Piawaian Kualiti Udara Persekitaran Malaysia (Jabatan Alam Sekitar Malaysia, 2015)

Pencemar udara	Purata	Garis Panduan Malaysia (kepekatan)	
	Masa	ppm	*(µg/m³)*
Sulfur dioksida (SO_2)	1 jam 24 jam	0.13 0.04	350 105
Nitrogen dioksida (NO_2)	1 jam 24 jam	0.17 0.04	320 10
*Karbon monoksida (CO)***	1 jam 8 jam	30.0 9.0	35 10
Ozon (O_3)	1 jam 8 jam	0.10 0.06	200 120
Habuk halus (PM^{10})	24 jam 12 bulan	- -	150 50

*Nota: **(mg/m3).*

: Tulisan yang ditebalkan adalah tempoh masa yang digunakan untuk persampelan data udara di lokasi persampelan bagi semua kawasan kajian.

Dalam konteks menentukan status kualiti udara di kawasan kajian, penilaian terhadap lima parameter kualiti udara dilakukan secara *in-situ* dan dianalisis di makmal berdasarkan piawaian yang ditetapkan untuk menentukan tahap pencemaran udara di semua kawasan kajian. Persampelan kualiti udara bagi gas pencemar yang memerlukan persampelan selama satu jam iaitu SO_2, NO_2, CO, dan O_3. Kajian juga dilakukan sebanyak tiga kali sehari iaitu pada waktu pagi antara jam 7.30 hingga 8.30 pagi, jam 12.30 tengah hari hingga 1.30 petang bagi waktu tengahari dan pada waktu malam iaitu antara jam 7.00 hingga 8.00 malam. Manakala bagi gas pencemar PM_{10} ditentukan dalam tempoh masa 24 jam.

Keputusan analisis parameter sulfur dioksida (SO_2)

Sulfur dioksida (SO_2) tergolong dalam kumpulan gas sulfur oksida (SO_x) dan boleh larut dengan mudah di dalam air. Ia tidak mempunyai warna, tidak boleh bernyala dan meletus serta mempunyai bau yang kurang menyenangkan (*Oklahoma Department of Environmental Quality*, 2011). Gas SO_2 terbentuk melalui proses antropogenik iaitu daripada loji janakuasa elektrik, penapisan petroleum, pembuatan simen dan peleburan kuprum.

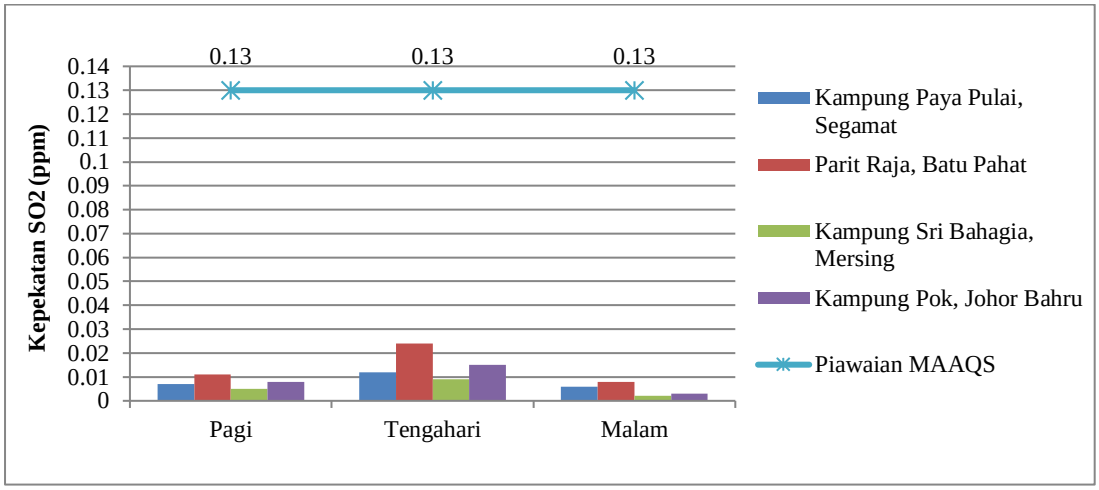
SO_2 merupakan gas yang boleh menyebabakan masalah kesihatan kepada manusia akibat pendedahan yang lama. Gas ini berupaya memberi kesan kepada sistem pernafasan, perubahan dalam sistem ketahanan paru-paru dan gangguan kepada penyakit kardiovaskular yang sedia ada. Selain dari itu, gas pencemar ini turut memberi kesan yang buruk apabila bergabung dengan air yang membentuk hujan asid dan memberi kesan kepada tumbuhan, kehidupan akuatik dan hakisan kepada cat dan bahan binaan yang terdiri daripada logam dan juga konkrit (Rindam, 2010).

Jadual 3 menujukkan purata kadar kepekatan gas sulfur dioksida (SO_2) di keempat-empat kawasan kajian bagi hari bekerja dan pada hari tidak bekerja. Nilai kepekatan SO_2 yang sesuai menurut Piawaian Kualiti Udara Persekitaran (MAAQS) adalah 0.13 ppm bagi tempoh satu jam.

Jadual 3: Purata data cerapan bagi parameter SO_2 di kawasan kajian

Kawasan kajian	Purata nilai SO_2 (ppm)		
	Pagi	Tengahari	Malam
Kampung Paya Pulai, Segamat	0.007	0.012	0.006
Parit Raja, Batu Pahat	0.011	0.024	0.008
Kampung Sri Bahagia, Mersing	0.005	0.009	0.002
Kampung Pok, Johor Bahru	0.008	0.015	0.003

Manakala Rajah 3 pula menunjukkan kadar kepekatan purata bagi gas SO_2 di semua stesen persampelan bagi tempoh satu jam tidak melebihi had yang ditetapkan oleh MAAQS iaitu 0.13 ppm. Bacaan kadar kepekatan SO_2 berada dalam julat 0.024 hingga 0.002 ppm dengan bacaan tertinggi dicatatkan di Parit Raja, Batu Pahat pada waktu tengahari. Berdasarkan ujian statistik Anova (satu hala) antara ke semua stesen persampelan menunjukkan bahawa tidak terdapat perbezaan yang signifikan antara stesen-stesen persampelan ($p>0.005$). Kadar kepekatan SO_2 yang dicatatkan di kawasan kajian adalah hampir sama dan sekata pada masa persampelan yang berbeza. Di kawasan kajian, SO_2 merupakan gas tercemar akibat daripada proses pembakaran bahan api dari kenderaan dan aktiviti perindustrian.



Rajah 3: Perbandingan kadar kepekatan SO_2 dengan MAAQS di semua kawasan kajian mengikut masa (waktu tempatan)

Keputusan analisis parameter nitrogen dioksida (NO_2)

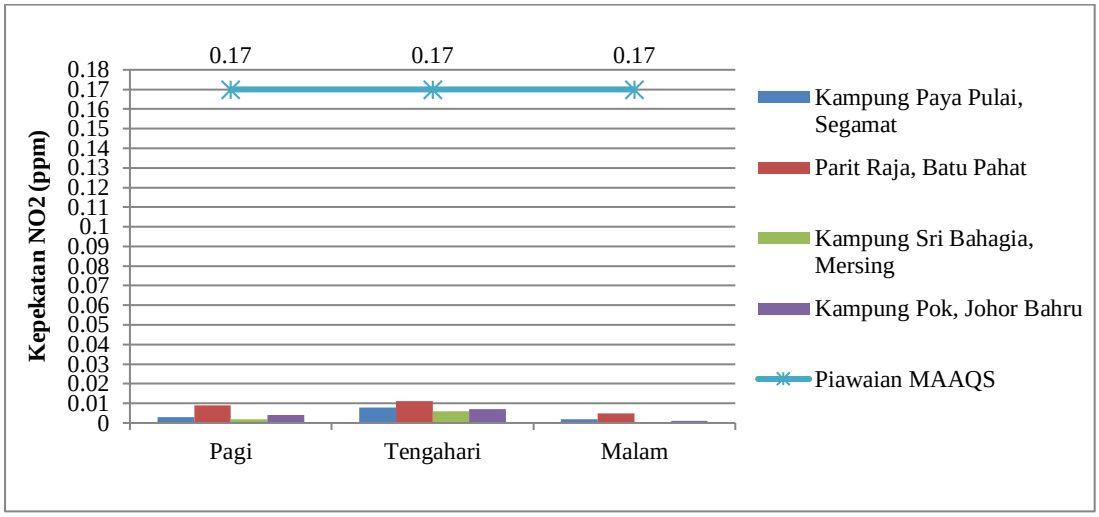
Nitrogen dioksida (NO_2) adalah gas pencemar yang sentiasa ada di kawasan bandar kerana NO_2 terbentuk secara antropogenik seperti pembakaran bahan api pada suhu yang tinggi yang datang dari sumber luaran dan dalaman. Sumber luaran adalah daripada pembakaran enjin kenderaan bermotor, kelengkapan elektrik dan aktiviti perindustrian (*World Health Organization*, 2005). Bagi sumber dalaman, NO_2 datangnya dari dapur gas dan asap rokok (Levy *et al*., 1998).

Jadual 4 menunjukkan keputusan hasil data persampelan yang dijalankan di kawasan kajian. Kadar kepekatan yang dibenarkan menurut Piawaian Kualiti Udara Persekitaran (MAAQS) bagi NO_2 bagi tempoh persampelan selama satu jam adalah 0.17 ppm.

Jadual 4: Data cerapan bagi parameter NO_2 di semua kawasan kajian

Kawasan kajian	Purata nilai NO_2 (ppm)		
	Pagi	Tengahari	Malam
Kampung Paya Pulai, Segamat	0.003	0.008	0.002
Parit Raja, Batu Pahat	0.009	0.011	0.005
Kampung Sri Bahagia, Mersing	0.002	0.006	0.000
Kampung Pok, Johor Bahru	0.004	0.007	0.001

Seperti gas SO_2, gas NO_2 turut terhasil daripada proses pembakaran bahan api dari kenderaan dan aktiviti industri. Hasil kajian mendapati, kadar kepekatan purata gas NO_2 di semua stesen persampelan bagi tempoh satu jam berada dalam julat 0.00 hingga 0.011 ppm. Hasil analisis Anova antara semua stesen menunjukkan terdapat perbezaan yang bererti antara stesen. Merujuk Rajah 4, semua nilai bacaan yang diperolehi jauh tidak melepasi had yang diperuntukkan oleh MAAQS. Kepekatan NO_2 didapati mencatatkan kepekatan yang tertinggi pada waktu siang iaitu ketika kenderaan berada pada paras yang maksima. Kawasan Parit Raja memperolehi bacaan tertinggi berbanding kawasan lain.



Rajah 4: Perbandingan kadar kepekatan NO_2 dengan MAAQS di semua kawasan kajian mengikut masa (waktu tempatan)

Keputusan analisis parameter karbon monoksida (CO)

Karbon monoksida (CO) adalah gas yang tidak bewarna pada suhu udara yang normal, tidak berbau, tidak mempunyai rasa (Yahaya & Ramli, 2008) dan menghasilkan gas beracun apabila karbon dalam bahan api tidak dibakar sepenuhnya.

Manakala, sumber utama penghasilan CO secara antropogenik adalah melalui pengeluaran asap kenderaan bermotor (Ibrahim, 2004). Paras CO adalah gas yang membahayakan dan boleh membawa maut jika dihidu dalam suatu jangka masa panjang dengan kadar kepekatan yang melebihi 1000 ppm (Yahaya & Ramli, 2008).

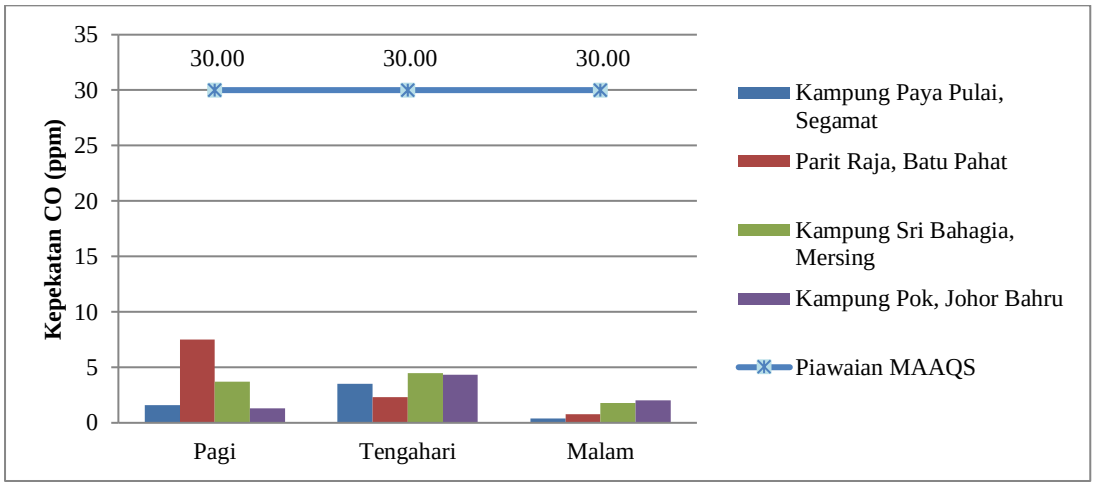
Jadual 5 menunjukkan bacaan kepekatan gas CO di keempat-empat kawasan kajian bagi tempoh satu jam persampelan dan Rajah 5.8 pula mempamerkan perbandingan dengan piawaian secara graf nilai CO untuk setiap kawasan kajian. Piawaian Kualiti Udara Persekitaran Malaysia (MAAQS) menetapkan kadar kepekatan CO yang dibenarkan adalah 30.0 ppm bagi tempoh satu jam.

Jadual 5: Data cerapan bagi parameter CO di semua kawasan kajian

Kawasan kajian	Nilai purata CO (ppm)		
	Pagi	Tengahari	Malam
Kampung Paya Pulai, Segamat	1.60	3.51	0.40
Parit Raja, Batu Pahat	7.53	2.33	0.76
Kampung Sri Bahagia, Mersing	3.70	4.50	1.80
Kampung Pok, Johor Bahru	1.30	4.32	2.04

Berdasarkan Rajah 5, kadar kepekatan purata gas CO bagi semua stesen persampelan di semua kawasan kajian dalam tempoh persampelan selama satu jam berada dalam julat 0.58 hingga 7.53 ppm. Ujian Anova (satu hala) antara semua stesen persampelan menunjukkan bahawa tidak terdapat perbezaan yang bererti antara stesen ($p>0.05$). Hasil kajian mendapati, kadar kepekatan CO mencatatkan bacaan yang tinggi pada waktu siang (pagi dan tengahari) berbanding pada waktu malam ekoran kenderaan berkurangan bagi semua kawasan kajian. Sebagai contoh di Parit Raja, Batu Pahat yang mana pola kepekatan CO lebih tinggi pada

waktu pagi sama ada pada hari bekerja (7.53 ppm) mahupun pada hujung minggu (6.85 ppm) apabila jalan raya sibuk dengan kenderaan bermotor. Kadar kepekatan CO biasanya dikaitkan dengan pergerakan kenderaan yang perlahan. Walau bagaimanapun, kadar kepekatan yang direkodkan di semua kawasan kajian masih tidak melepasi had yang diperuntukkan oleh MAAQS iaitu 30.0 ppm dengan pendedahan selama sejam.



Rajah 5: Perbandingan kadar kepekatan CO dengan MAAQS di semua kawasan kajian mengikut masa (waktu tempatan)

Keputusan analisis parameter ozon (O_3)

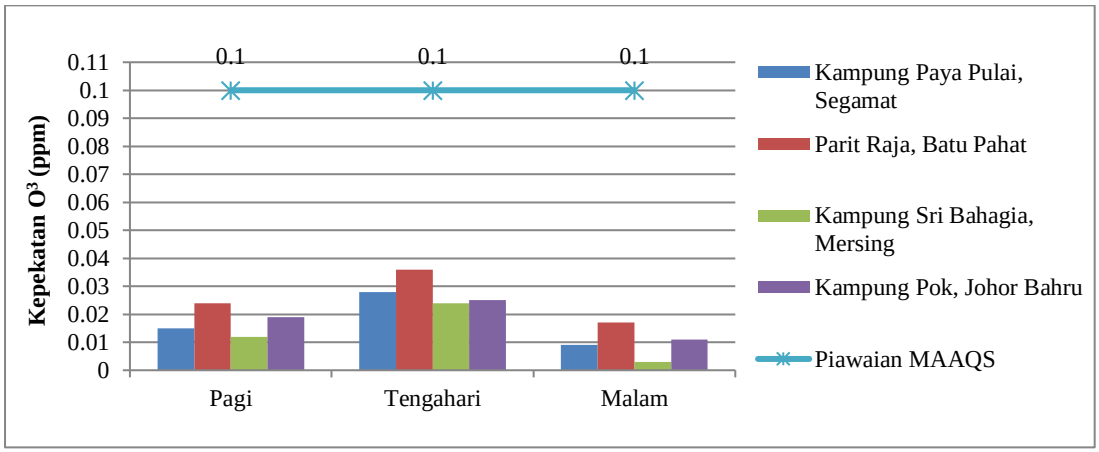
Ozon (O_3) adalah gas yang terdiri daripada gabungan tiga atom oksigen. Kebiasaannya ianya tidak tersebar secara terus ke dalam udara. O_3 terbentuk hasil cahaya matahari dan kepanasan cuaca serta tindak balas kimia di antara nitrogen oksida (NO_X) dengan sebatian organik meruap (VOCs) (Banan *et al*., 2013; *World Health Organization*, 2006) dari pelepasan kenderaan bermotor dan industri dengan kehadiran cahaya matahari (Song *et al*., 2011; Chelani, 2013). Lazimnya, kepekatan O_3 menjadi tinggi menjelang lewat tengahari atau pada awal petang. Kehadiran O_3 pada kadar yang tinggi menyebabkan kesan buruk kepada kesihatan manusia seperti masalah pernafasan, asma, radang paru-paru, hidung tersumbat dan jangkitan lain disamping mengurangkan jarak penglihatan manusia (Highfill & Costa, 1995; Ho *et al*., 2007; Mills *et al*., 2011).

Jadual 6 menunjukkan bacaan kepekatan gas O_3 di keempat-empat kawasan kajian bagi tempoh satu jam dengan persampelan. Manakala, Rajah 5.9 merupakan graf yang diplot bagi menjelaskan perbandingan dapatan bacaan O_3 dengan piawaian kepekatan menurut Piawaian Kualiti Udara Persekitaran (MAAQS). Nilai kepekatan yang sesuai menurut MAAQS adalah 0.10 ppm bagi tempoh satu jam di semua kawasan kajian.

Jadual 6: Kadar kepekatan bagi parameter O_3 di semua kawasan kajian

Kawasan kajian	Nilai purata O_3 (ppm)		
	Pagi	Tengahari	Malam
Kampung Paya Pulai, Segamat	0.015	0.028	0.009
Parit Raja, Batu Pahat	0.024	0.036	0.017
Kampung Sri Bahagia, Mersing	0.012	0.024	0.003
Kampung Pok, Johor Bahru	0.019	0.025	0.011

Merujuk kepada Rajah 6, kadar kepekatan purata gas O_3 di semua stesen dalam tempoh persampelan selama satu jam berada dalam julat 0.003 hingga 0.036 ppm. Walau bagaimanapun, semua nilai yang diperolehi jauh tidak melepasi piawaian yang disarankan oleh Jabatan Alam Sekitar iaitu 0.10 ppm. Ujian statistik Anova (satu hala) antara stesen membuktikan tidak terdapat perbezaan yang bererti ($p>0.05$). Kadar kepekatan O_3 tertinggi dicatatkan di Stesen Parit Raja, Batu Pahat pada waktu tengahari iaitu 0.036 ppm, manakala kadar kepekatan O_3 terendah adalah di Kampung Sri Bahagia, Mersing yang dicatatkan pada waktu malam iaitu 0.003 ppm.. Kepekatan tertinggi di Parit Raja mungkin disumbangkan oleh bilangan kenderaan bermotor yang jauh lebih tinggi berbanding masa dan kawasan kajian lain**.**



Rajah 6: Perbandingan kadar kepekatan O_3 dengan MAAQS di semua kawasan kajian mengikut masa (waktu tempatan)

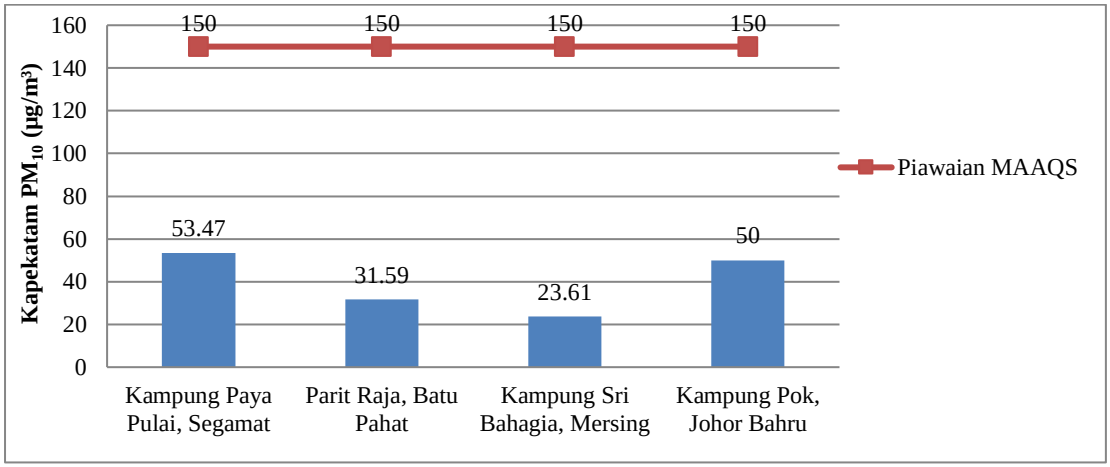
Keputusan analisis parameter habuk halus (PM^{10})

Partikel zarah halus/habuk (PM) adalah campuran kompleks zarah yang sangat kecil dan titisan cecair yang boleh dibahagikan kepada zarah halus dan kasar (Fierro, 2000). Saiz zarah halus adalah kurang daripada 2.5 µm dan zarah kasar adalah lebih daripada 2.5 µm hingga 10 µm. Saiz zarah ini secara langsung dikaitkan dengan potensi individu untuk mendapat masalah kesihatan. *United States of Environmental Protection Agency* (USEPA), memberi perhatian terhadap zarah yang mempunyai 10 mikrometer garis pusat atau lebih kecil kerana kumpulan zarah ini yang biasanya memasuki tekak dan hidung seterusnya ke dalam paru-paru (Deutsch *et al*., 2008). Apabila dihidu, zarah ini boleh memberi kesan kepada jantung dan paru-paru dan menyebabkan kesan kesihatan yang serius.

Jadual 7 menunjukkan bacaan kepekatan PM^{10} di keempat-empat kawasan kajian bagi tempoh 24 jam dengan pencerapan dilakukan bagi hari bekerja dan pada hujung minggu. Rajah 5.10 pula mempamerkan perbandingan dengan piawaian secara graf nilai PM_{10} untuk setiap kawasan kajian. Mengikut Piawaian Kualiti Udara Persekitaran Malaysia (MAAQS), kadar kepekatan yang dibenarkan bagi tempoh pendedahan selama 24 jam adalah 150 µg/m^3.

Jadual 7: Kadar kepekatan parameter PM^{10} di semua kawasan kajian

Kawasan kajian	Nilai purata PM^{10} (µg/m^3)
Kampung Paya Pulai, Segamat	53.47
Parit Raja, Batu Pahat	31.59
Kampung Sri Bahagia, Mersing	23.61
Kampung Pok, Johor Bahru	50.00



Rajah 7: Perbandingan kadar kepekatan PM^{10} dengan MAAQS di semua kawasan kajian

Status pencemaran udara berdasarkan Indeks Pencemaran Udara

Setelah keputusan bagi setiap parameter gas pencemar diperolehi, maka Indeks Pencemaran Udara (IPU) bagi semua kawasan kajian dikira. Sebelum mendapatkan nilai IPU, pengiraan sub-indeks bagi semua gas pencemar dilakukan berdasarkan nilai kepekatan yang diperolehi dan hasil yang diperolehi akhirnya memberi nilai IPU. Setiap gas pencemar mempunyai rumus pengiraan yang berbeza. Rumusan pengiraan adalah seperti yang ditunjukkan dalam Jadual 8.

Jadual 8: Rumusan pengiraan untuk mendapatkan nilai Indeks Pencemaran Udara

Rumus pengiraan sub-indeks bagi sulfur dioksida (SO_2)	
kepekatan < 0.04 ppm	**IPU = kepekatan x 2500**
0.04 < kepekatan < 0.3	**IPU = 100 + [(kepekatan – 0.04) x 384.61]**
0.3 < kepekatan < 0.6	**IPU = 200 + [(kepekatan – 0.3) x 333.333]**
kepekatan 0.6 ppm	**IPU = 300 + [(kepekatan – 0.6) x 500]**
Rumus pengiraan sub-indeks bagi nitrogen dioksida (NO_2)	
kepekatan < 0.17 ppm	**IPU = kepekatan x 588.23529**
0.17 < kepekatan < 0.6	**IPU = 100 + [(kepekatan – 0.17) x 232.56]**
0.6 < kepekatan < 1.2	**IPU = 200 + [(kepekatan – 0.6) x 166.667]**
kepekatan > 1.2 ppm	**IPU = 300 + [(kepekatan – 1.2) x 250]**
Rumus pengiraan sub-indeks bagi karbon monoksida (CO)	
kepekatan < 9 ppm	**IPU = kepekatan x 11.11111**
9 < kepekatan < 15	**IPU = 100 + [(kepekatan – 9) x 16.66667]**
15 < kepekatan 30	**IPU= 200 + [(kepekatan – 15) x 6.66667]**
Kepekatan > 30 ppm	**IPU = 300 + [(kepekatan – 30) x 10]**
Rumus pengiraan sub-indeks bagi ozon (O_3)	
kepekatan < 0.2 ppm	**IPU = kepekatan x 1000**
0.2 < kepekatan < 0.4	**IPU = 200 + [(kepekatan – 0.2) x 500]**
kepekatan > 0.4 ppm	**IPU = 300 + [(kepekatan – 0.4) x 1000]**
350 < kepekatan 420	**IPU =200 + [(kepekatan – 350) x 1.4286]**
420 < kepekatan < 500	**IPU = 300 + [(kepekatan – 420) x 1.25]**
kepekatan > 500 µg / cu.m	**IPU = 400 + [kepekatan - 500]**
Rumus pengiraan sub-indeks bagi PM^{10}	
kepekatan < 50µg / cu.m	**IPU = kepekatan**
50 < kepekatan < 350	**IPU = 50 + [(kepekatan – 50) x 0.5]**
350 < kepekatan 420	**IPU =200 + [(kepekatan – 350) x 1.4286]**
420 < kepekatan < 500	**IPU = 300 + [(kepekatan – 420) x 1.25]**
kepekatan > 500 µg / cu.m	**IPU = 400 + [kepekatan - 500]**

Sumber: Jabatan Alam Sekitar Malaysia, 2015

Manakala jadual 9 pula menunjukkan hasil pengiraan yang telah dijalankan. Nilai sub-indeks adalah seperti yang ditunjukkan dalam Jadual 9 dan nilai IPU dapat ditentukan.

Jadual 9: Nilai Indeks Pencemaran Udara bagi setiap parameter gas pencemar di semua kawasan kajian

Lokasi kajian	**SO_2**	**NO_2**	**CO**	**O_3**	**PM^{10}**
Kampung Paya Pulai, Segamat	20	10	19	17	57
Parit Raja, Batu Pahat	35	20	39	26	50
Kampung Sri Bahagia, Mersing	12.5	7.5	37	13	24
Kampung Pok, Johor Bahru	22.5	10	28	18	32

Merujuk Jadual 9, julat nilai IPU yang diperolehi sepanjang tempoh kajian adalah antara 7.5 hingga 57 mengikut skala IPU. Nilai bacaan IPU yang tertinggi dicatatkan di Kampung Paya Pulai, Segamat iaitu gas pencemar partikel zarah halus/habuk (PM^{10}) dengan nilai IPU adalah 57 yang berstatus 'sederhana' yang mana tidak menimbulkan kesan buruk kepada kesihatan dan orang ramai boleh mengekalkan gaya hidup sihat dengan aktiviti di luar rumah. Bagi paras bacaan nitrogen oksida (SO_2) adalah yang terendah dicatatkan di kampung tersebut berbanding dengan kawasan kajian lain dengan bacaan IPU adalah 10 yang diklasifikasikan sebagai 'sihat'. Faktor kadar kepekatan PM^{10} yang tinggi di kampung ini

dipengaruhi oleh bilangan kenderaan bermotor yang tinggi dan debu jalan berpunca dari keluar masuk lori membawa muatan bahan binaan.

Di Parit Raja, Batu Pahat, bacaan IPU tertinggi direkodkan dari gas pencemar PM^{10} dengan bacaan IPU adalah 50 yang diklasifikasikan sebagai 'sihat' iaitu pencemaran berada di tahap rendah tanpa kesan buruk kepada kesihatan. Bagi gas SO_2, NO_2 dan CO pula, dilihat sebagai bacaan yang tertinggi berbanding kawasan kajian lain dengan bacaan IPU masing-masing adalah 35, 20 dan 39. Kandungan SO_2, NO_2 dan CO yang tinggi adalah disebabkan oleh faktor kawasan persekitaran yang dikelilingi oleh kilang dan kenderan yang membebaskan asap ke udara. Namun demikian, ianya masih berada pada paras 'sihat' yang mana walaupun terdapat sedikit pencemaran, namun tiada sekatan untuk aktiviti luar kepada orang ramai. Begitu juga dari segi bacaaan O_3 iaitu 26 yang dikategorikan sebagai 'sihat.

Di Kampung Sri Bahagia, Mersing, indeks CO merupakan parameter pencemar udara yang mencatatkan kepekatan yang tinggi berbanding SO_2, NO_2, O_3 dan PM^{10} dengan bacaan IPU adalah 37 dengan status 'sihat' Manakala, indeks PM^{10} merupakan yang terendah jika dibandingkan dengan tiga kawasan kajian lain dengan nilai IPU adalah 24.

Bagi Kampung Pok, Johor Bahru pula, hasil kajian mendapati gas PM^{10} merupakan gas pencemar yang direkodkan tertinggi dengan nilai IPU ialah 32. Walaupun bacaan CO merupakan penyumbang utama kepada pencemaran udara di kampung ini, namun kadar kepekatan gas CO ini masih berada dalam keadaan yang selamat dan tidak membimbangkan. Berdasarkan kepada kriteria Jabatan Alam Sekitar Malaysia, ianya berada dalam kategori 'sihat'.

Perbincangan

Secara umumnya, kadar pencemaran udara di Kampung Paya Pulai, Segamat, Parit Raja, Batu Pahat, Kampung Sri Bahagia, Mersing dan Kampung Pok, Johor Bahru masih terkawal. Taburan bacaan Indeks Pencemaran Udara (IPU) di kawasan luar bandar ini di berada di bawah nilai yang dibenarkan oleh Jabatan Alam Sekitar Malaysia. Didapati gas pencemar PM^{10}, CO dan O_3 adalah penyumbang utama kepada pencemaran udara di semua kawasan kajian. IPU secara puratanya kurang dari bacaan 50 dikategorikan sebagai 'sihat'. Hanya satu stesen yang mencatatkan nilai 'sederhana' iaitu di Kampung Paya Pulai, Segamat yang disumbangkan oleh kepekatan PM^{10}.

Menurut Rindam (2010), zarah halus termasuk debu, jelaga yang merupakan ciri PM^{10} terhasil daripada pelbagai sumber pembakaran bahan bakar dari sumber fosil seperti minyak petrol dan diesel oleh kenderaan bermotor, jana kuasa dan proses perindustrian yang menggunakan sumber arang batu. Terdapat juga yang berpunca dari kawasan pembinaan dan aktiviti pertanian (Wilson & Spengler, 1996). Manakala, dua pertiga daripada kandungan gas pencemar CO datangnya daripada kenderaan terutamanya di jalan raya (Rindam, 2010). Sekiranya terdapat peningkatan kepekatan PM^{10}, ianya akan memberikan impak kesihatan yang signifikan terutamanya kepada golongan berisiko termasuklah kanak-kanak, warga tua dan individu yang mempunyai masalah kesihatan berkaitan dengan sistem pernafasan seperti asma, *brokitis, pneumoia* dan *emphisema*.

Walaupun kualiti udara di kawasan luar bandar terpilih di negeri Johor masih berada dalam kategori "sihat" dan "sederhana" (berasaskan rujukan pada IPU JAS), sumber pencemaran gas pencemar PM^{10}, CO dan O3 perlu dikawal kerana ia merupakan penyumbang utama kepada pencemaran udara di semua kawasan kajian. Langkah-langkah awal seperti kekerapan pemantauan dari pihak berkuasa perlu dilakukan supaya kualiti udara di kawasan luar bandar tidak bertukar kepada keadaan yang "tidak sihat".

Oleh yang demikian, penduduk setempat, pengguna jalan raya dan orang awam serta pihak berkuasa disarankan supaya lebih peka dalam mengurus dan menangani masalah berkaitan sumber pencemar udara di peringkat awal supaya pengawalan kualiti udara dapat dikawal walaupun, kawasan luar bandar semakin membangun dengan pesat.

Kesimpulan

Secara keseluruhannya, dapat disimpulkan terdapat penurunan kualiti alam sekitar di kawasan luar bandar. Walaupun tidak mencatatkan jumlah kes pencemaran yang tinggi berbanding kawasan luar bandar yang lain, tetapi perhatian perlu diberikan supaya tahap pencemaran tidak menjadi lebih serius. Punca dan kesan yang menyumbang kepada pencemaran perlu dikenal pasti supaya tindakan untuk memulihara dan memelihara dapat dilaksanakan. Asasnya, kemerosotan dan penurunan kualiti alam sekitar akan memberi impak negatif kepada kualiti hidup masyarakat.

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ANALISIS CORAK PEMBELIAN CENDERAMATA DI KALANGAN PELANCONG ANTARABANGSA DI SABAH: ANALYSIS OF SOUVENIRS PURCHASE PATTERN IN INTERNATIONAL TOURIST IN SABAH

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Abstract**:** *Over the last few decades, the tourism industry has grown tremendously in Malaysia, especially the state of Sabah. The shopping sub-sector is an increasingly important component in the industry as well as accommodation, food and beverages, local transportation, entertainment and more. Statistics released by Tourism Malaysia records the bulk of international tourist spending in the country for shopping. Shopping spending increased from 31.3% in 2015 to 31.7% in 2016, surpassing the expenditure of accommodation for the second consecutive year. The purpose of this study is to identify patterns of souvenir buying among international tourists in Sabah. The findings reveal that the important features that international travelers prefer in choosing souvenirs are local products, picture imaging, and accessories and decorations. Meanwhile, local food products in the form of dry products are the main choice of international travelers followed by mini products such as key chains, pens, bumper stickers and others, and postcards and handicrafts. In addition, the souvenir features that attract international travelers to buy them are products must be traditional, easy to carry and value for families and friends. It is also found that in addition to self-esteem is given to neighbors and relatives as their main purpose is to buy souvenirs. The purchase of souvenirs is an important activity and experience in tourism to tourists, so it is hoped that this study will contribute to improving and furthering the souvenir industry in Sabah especially and other places throughout Malaysia in general.*

Keywords: *Product Category, Product Type, Souvenir Features & Store Features*

Abstrak: *Sejak beberapa dekad kebelakangan ini, industri pelancongan telah berkembang dengan amat pesat di Malaysia khususnya negeri Sabah. Subsektor beli-belah merupakan komponen yang semakin penting dalam industri tresebut selain penginapan, makanan dan minuman, pengangkutan tempatan, hiburan dan lain-lain. Statistik yang dikeluarkan oleh Tourism Malaysia merekodkan sebahagian besar perbelanjaan pelancong antarabangsa di negara ini ialah untuk beli-belah. Perbelanjaan beli-belah meningkat daripada 31.3% pada tahun 2015 kepada 31.7% pada tahun 2016, mengatasi perbelanjaan penginapan untuk tahun kedua berturut. Tujuan kajian ini adalah untuk mengenalpasti corak pembelian cenderamata di kalangan pelancong antarabangsa di Sabah. Dapatan kajian mendedahkan bahawa ciri penting yang diutamakan pelancong antarabangsa dalam memilih cenderamata ialah produk tempatan, imej bergambar, dan aksesori dan hiasan. Sementara, produk makanan tempatan yang berupa produk kering merupakan pilihan utama pelancong antarabangsa diikuti produk mini seperti key chain, pen, bumper sticker dan lain-lain, dan poskad serta kraftangan. Selain*

itu, ciri-ciri cenderamata yang menarik minat pelancong antarabangsa untuk membelinya ialah produk mesti berciri tradisional, mudah dibawa dan bernilai untuk keluarga dan rakan. Didapati juga selain untuk diri sendiri turut diberikan kepada jiran dan saudara-mara sebagai tujuan utama mereka membeli cenderamata. Pembelian cenderamata merupakan satu aktiviti dan pengalaman yang penting di dalam pelancongan kepada pelancong, maka diharapkan hasil kajian ini dapat memberikan sumbangan dalam memperbaiki dan memajukan lagi industri cenderamata di Sabah khususnya dan tempat-tempat lain di seluruh Malaysia amnya.

Kata Kunci: *Kategori Produk, Jenis Produk, Ciri-ciri Cenderamata dan Ciri-ciri Kedai*

Pengenalan

Subsektor membeli-belah merupakan komponen penting dalam industri pelancongan selain penginapan, pengangkutan, makanan, rekreasi dan persidangan. Subsektor tersebut boleh menyumbang kepada pertumbuhan ekonomi negara. Ini dapat dilihat daripada pola perbelanjaan pelancong antarabangsa ke Malaysia pada tahun 2005 di mana aktiviti membeli-belah merupakan komponen yang kedua terbesar selepas penginapan. Subsektor itu menyumbang 20.4% selepas subsektor penginapan, 33.1%. Perbelanjaan lain seperti subsektor makanan dan pula minuman menyumbang 17.4% (RMK-9). Pendapatan tukaran asing juga meningkat pada kadar pertumbuhan tahunan 12.4% selari dengan peningkatan jumlah ketibaan pelancong iaitu daripada RM17.3 billion pada 2000 kepada RM31.0 billion pada tahun 2005.

Berdasarkan dapatan kajian yang telah dijalankan pada tahun 1991 oleh *Economic and Social Commission For Asia and The Pacific Bangkok (ESCAP)*, pelancong domestik dan antarabangsa telah membelanjakan wang bagi tujuan membeli-belah ke atas beberapa item yang tertentu seperti barangan kulit, tekstil, *pewterware, jewellery, non-electric*, wangian dan lain-lain di Malaysia. Ini menjadi petunjuk bahawa membeli-belah merupakan faktor yang penting dalam industri pelancongan.

Selain itu, pelancong juga berminat membeli hasil-hasil seni dan kraftangan tempatan. Produk kraf tempatan seperti sulaman, hasil manik, ukiran kayu dan percetakan batik mempunyai potensi untuk diperluas. Namun, pihak-pihak berkepentingan dalam industri pelancongan di negara ini kurang aktif mempromosi produk cenderamata tempatan yang berada di dalam pasaran ketika ini. Ini berikutan lambakan pelbagai jenis produk cenderamata asing yang dijual di pasaran tempatan. Kajian Yayasan Sabah pada 2013 menunjukkan produk cenderamata asing kebanyakan datang dari China, Indonesia, Filipina dan Thailand. Ini dapat dilihat di lokasi-lokasi tumpuan pelancong seperti Gaya Streat, Philipino Market dan kedai-kedai kraftangan di sekitar Bandaraya Kota Kinabalu, pulau pelancongan dan Kundasang. Keadaan tersebut akan memberikan gambaran yang kurang baik kepada para pelancong khususnya pelancong antarabangsa yang mungkin menganggap bahawa produk kraf di Sabah kurang berkualiti dan tidak menarik.

Pemahaman terhadap perkara ini adalah penting kepada industri tempatan di dalam usaha untuk menyediakan produk cenderamata yang sesuai dengan keperluan dan kehendak pelancong. Penyelidik percaya bahawa dengan mengetahui corak dan gaya pembelian cenderamata oleh pelancong ianya akan dapat membantu pengusaha tempatan memperbaiki dan meningkatkan kualiti dan inovasi produk dalam konteks kos, kualiti, reka bentuk dan lain-lain.

Dapatan kajian ini telah berupaya menjawab persoalan yang ditimbulkan dalam isu di atas sebelum ini yang berkaitan dengan faktor-faktor yang mempengaruhi corak pembelian cenderamata pelancong di Malaysia khususnya di Sabah. Daripada persoalan ini penyelidik telah mengkaji perkaitan di antara beberapa variabel seperti faktor demografi pelancong dengan ciri-ciri produk dan ciri-ciri kedai dalam mempengaruhi pelancong untuk membeli cenderamata ketika bercuti di negeri Sabah.

Tinjauan Literatur

Suhaila *et. al.* (2017) mendapati faktor kemudahan dan populariti dan keselamatan mempengaruhi kepercayaan pengguna terhadap pembelian atas talian. Manakala faktor pengalaman tidak mempengaruhi kepercayaan pengguna terhadap pembelian atas talian. Mereka juga mengharapkan agar kajian tersebut dapat dijadikan rujukan oleh usahawan-usahawan yang terlibat dalam perniagaan atas talian supaya menambahbaik kualiti kemudahan dan keselamatan perniagaan atas talian mereka. Menurut Zaleha *et. al.* (2016) mendapati bahawa faktor kepercayaan dan risiko telah dikenalpasti sebagai faktor utama dalam pembuatan keputusan golongan mahasiswa untuk melakukan pembelian secara atas talian.

Zaiton (2007) mendedahkan corak pembelian cenderamata pelancong antarabangsa yang mengunjungi Bandaraya Kuala Lumpur dan Bandaraya Melaka yang dipengaruhi oleh pelbagai faktor termasuklah tempoh masa yang diperuntukkan untuk membeli-belah cederamata, tujuan perjalanan, aktiviti sampingan semasa mengunjungi Malaysia, pendapatan tahunan kasar, ciri-ciri produk, ciri-ciri cenderamata, dan alasan mereka membeli cenderamata di Malaysia. Kajian turut dilakukan terhadap jenis-jenis produk cenderamata yang menjadi pilihan pelancong antarabangsa di Malaysia yang boleh dibawa pulang.

Dapatan kajian oleh Mohd Koharuddin *et al.* (2004) menunjukkan faktor utama yang mendorong pembelian runcit di sesuatu premis peruncitan ialah perkhidmatan yang disediakan, susun atur barangan, lokasi dan produk yang ditawarkan. Faktor lokasi yang terpenting ialah berdekatan dengan rumah, kedudukan strategik dan berdekatan dengan tempat kerja. Perkhidmatan yang disediakan yang menjadi tarikan pengguna pula ialah sifat pekedai yang ramah dan membantu, boleh berhutang dan penyediaan khidmat penghantaran. Makala bagi aspek susun atur barangan pula elemen yang diutamakan termasuklah mengutamakan pelanggan, suasana ceria dan menarik serta pengubahsuuaian kedai agar sentiasa menarik. Bagi faktor produk yang dibekalkan pula ciri-ciri yang mendapat perhatian utama pengguna ialah kepelbagaian jenis barangan, kuantiti barang yang banyak, barang mudah diambil dan barangan berkualiti. Penemuan kajian oleh Siti Aisyah *et al. (*2004) pula menunjukkan bahawa faktor perfectionictic (*High Quality Conscious*) merupakan faktor utama mempengaruhi keputusan pengguna semasa membeli sesuatu barangan. Hasil kajian juga menunjukkan bahawa tidak terdapat perbezaan yang signifikan proses membuat keputusan dalam tingkah laku membeli di antara lelaki dan perempuan. Manakala terdapat perbezaan yang signifikan proses membuat keputusan dalam tingkah laku membeli berdasar etnik, status perkahwinan, umur, tahap pendidikan dan taraf pekerjaan di kalangan responden.

Menurut Kim & Littrell, (1999) terdapat 12 komponen yang menggalakkan pengguna mengunjungi sesebuah lokasi membeli-belah: harga, kualiti, fesyen, kepelbagaian, wakil jualan, kemudahsampaian ke lokasi, dan kriteria-kriteria kemudahan lain seperti servis, '*consumers value friendly conversation with knowledgeable sales staff*', promosi jualan, pengiklanan, suasana kedai dan reputasi. Di antara komponen-komponen tersebut, kriteria yang terpenting menjadi pilihan pelancong khususnya bagi yang pertama kali mengunjungi ialah lokasi kedai. Pelancong inginkan pengalaman yang autensiti bersama masyarakat yang

dikunjungi. Justeru itu, mereka ingin muncul untuk berbual dengan penduduk setempat, menyertai sebarang festival yang dianjurkan oleh masyarakat setempat, dan mengunjungi galeri seni, muzium dan teater.

Hasil pemerhatian yang telah dilakukan oleh Gee, Makens, dan Choy (1997) terhadap gelagat pelancong menunjukkan membeli-belah merupakan aktiviti pertama dan terakhir yang sering dilakukan oleh pelancong sebelum meninggalkan sesebuah destinasi. Kebiasaannya, mereka membeli sesuatu produk untuk di bawa pulang bukan sahaja untuk dirinya sendiri tetapi juga untuk keluarganya, sudaramara mahupun rakan-rakan. Terdapat pelbagai alasan mengapa seseorang individu membeli cenderamata sewaktu melakukan perjalanan. Pembelian cenderamata dilakukan kadangkala untuk ahli keluarganya, rakan-rakan, ahli-ahli dalam perniagaan, atau untuk diri sendiri sebelum kembali ke rumah.

Harold (1978) menyatakan bahawa keputusan membeli di kalangan pengguna sering dipengaruhi oleh faktor komunikasi media. Ini kerana media menyediakan pengguna dengan dua maklumat penting. Sebagai saluran hiburan, media menyediakan maklumat tentang fesyen semasa, produk terkini dan sebagainya untuk membolehkan pengguna mengetahui produk dan perkhidmatan yang boleh mereka dapatkan di pasaran. Media juga dapat menyediakan maklumat tentang jenama, tempat untuk mendapatkan sesuatu barang, promosi-promosi terkini dan diskaun. Selain itu, faktor komunikasi interpersonal juga penting untuk mempengaruhi keputusan membeli di kalangan pengguna. Untuk mencari produk dan servis yang benar-benar dapat memenuhi kepuasan, pengguna sering berkomunikasi dengan pengguna lain untuk mendapatkan pengalamandan pendapat mereka serta untuk melihat personaliti dan gaya hidup mereka.

Metodologi Kajian

Objektif kajian

Kajian ini bertujuan untuk mendapatkan maklumat berkaitan corak perbelanjaan pelancong asing mengenai produk cenderamata tempatan.

Sementara objektif khusus kajian adalah seperti berikut;

i. Mengenalpasti tentang ciri-ciri produk kraf yang sering menjadi pilihan pelancong sebagai cenderamata di Sabah.
ii. Mengetahui jenis kraf yang mempengaruhi pelancong dalam pembelian cenderamata di Sabah.
iii. Mengetahui ciri-ciri kedai kraf yang mempengaruhi pelancong dalam pembelian cenderamata di Sabah.
iv. Mengkaji tujuan pelancong membeli produk cenderamata berkaitan.

Skop dan Sampel Kajian

Sasaran kajian difokuskan kepada semua pelancong antarabangsa yang berkunjung ke Sabah pada tahun 2016. Subjek kajian ini adalah pelancong antarabangsa yang menginap di hotel dan resort di seluruh negeri Sabah. Sasaran kajian difokuskan kepada sampel seramai 366 orang atau 2.0% daripada 18,292 orang pelancong yang berkunjung ke kedai-kedai cenderamata di seluruh Sabah pada tahun 2016. Penetapan bilangan sampel kajian berdasarkan, nilai yang dicadangkan oleh Cohen, Manion & Morrison (2005); pada 5% kesilapan sampel dengan selang keyakinan sebanyak 95%.

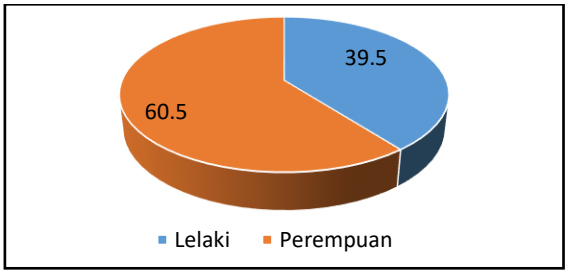
Analisis Data

Data yang dikumpul menerusi borang soal selidik diproses menggunakan Statistical Packages of Social Sciences (SPSS) Version 21.0. Selain menggunakan kaedah kuantitatif dalam analisis melalui paparan deskriptif seperti rajah dan jadual frekuensi digunakan bagi melihat profil asas responden. Analisis Mean juga turut digunakan bagi melihat perbezaan pandangan responden terhadap sesuatu pembolehubah berdasarkan jantina, negara asal, umur dan pekerjaan.

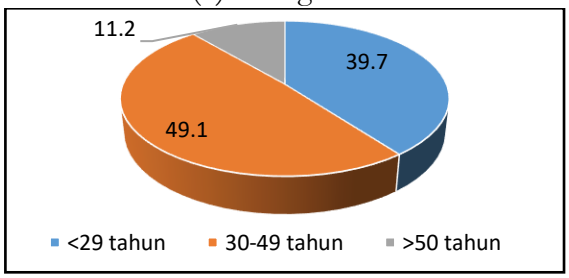
Selain itu, Crosstabulation juga turut digunakan bagi melihat corak taburan dan perkaitan dengan dua variabel kajian yang dikaji. Kaedah ini digunakan untuk melihat ciri-ciri produk dan jenis-jensi cenderamata yang diminati responden serta ciri-ciri kedai yang dikunjungi oleh responden.

Carta 1.1: Profil Responden

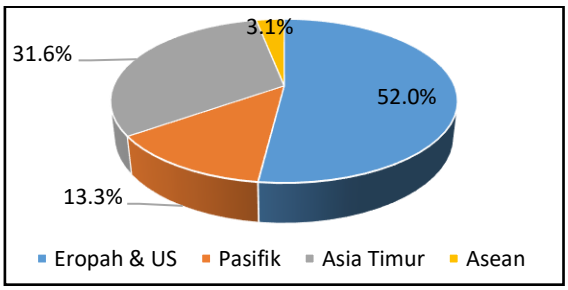
(a) Jantina



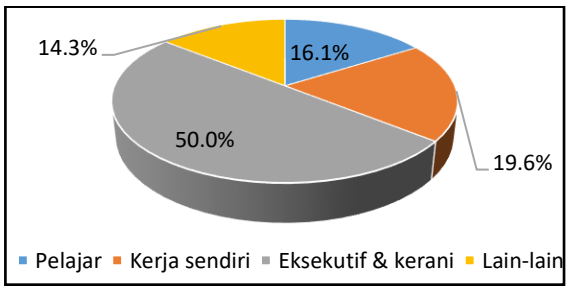
(b) Kategori Umur



(c) Negara Asal



(d) Pekerjaan



Dapatan Kajian

Profil Responden

Sebanyak 60.5% responden wanita telah mengikuti kajian ini dan selebihnya adalah lelaki. Umur mereka bervariasi di antara <29 tahun hingga >50 tahun di mana ramai responden muda iaitu <49 tahun menyertai kajian ini termasuk 39.7% responden berumur <29 tahun. Dari segi negara asal, 52.0% responden datang dari Eropah dan USA diikuti 31.6% dari Asia Timur dan negara lain seperti Pasifik dan Asean. Dalam analisis lanjutan didapati 50.0% responden bekerja sebagai eksekutif dan perkeranian, sementara 19.6% bekerja sendiri dan selebihnya pelajar dan lain-lain. Keterangan lanjut, rujuk Carta 1.1.

Ciri-ciri Perjalanan

Dalam analisis ke atas kekerapan pelancong yang melawat Sabah, didapati 81.7% responden baru pertama kali melawat Sabah diikuti lawatan kali kedua dan berikutnya. Tempoh lawatan keseluruhan responden ke negeri Sabah ialah 11.12 hari dengan median dan mode kira-kira 7.0 hari. Turut dikesan ada responden melawat Sabah hanya dalam sehari dan ada pula yang agak panjang kira-kira 90 hari. Tujuan utama responden melawat Sabah ialah bercuti iaitu sebanyak 90.5%, diikuti dengan urusan perniagaan 3.4% dan faktor lain seperti melawat kawan/saudara, membeli-belah, lawatan akademik, sukan dan lain-lain. Keterangan lanjut, rujuk Jadual 1.1.

Jadual 1.1: Ciri-ciri Perjalanan

Variabel	Ciri-ciri	Respons	
		N	(%)
Tujuan Melawat	Percutian	105	90.5
	Lawatan akademik	1	0.9
	Perniagaan	4	3.4
	Membeli belah	1	0.9
	Melawat kawan/ saudara	2	1.7
	Sukan	1	0.9
	Lain-lain	2	1.7
Jumlah		116	**100.00**
Aktiviti yang dilakukan	Membeli belah	59	17.2
	Melawat bandar	64	18.6
	Trekking	59	17.2
	Melawat taman tema	36	10.5
	Melawat pantai	63	18.3
	Acara kebudayaan	23	6.7
	Acara sukan	6	1.7
	Melawat muzium	34	9.9
Jumlah		344	**100.00**

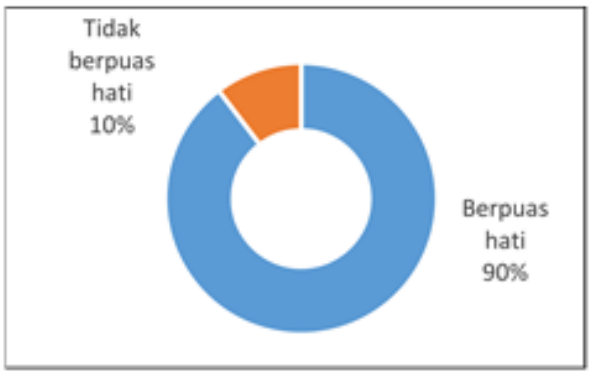
Purata Tempoh Lawatan	11	Hari
Kekerapan Tempoh Lawatan	7	Hari

Semasa berada di negeri Sabah, 18.6% responden bertumpu di bandaraya Kota Kinabalu sambil meninjau keindahannya, sementara 18.3% pula mengambil peluang mengunjungi pantai Tanjung Aru dan pantai yang terdapat di pulau-pulau berdekatan sambil melakukan selaman skuba. Selain itu, masing-masing 17.2% mengikuti aktiviti trekking dan membeli-belah serta aktiviti lain seperti melawat taman tema, melawat muzium/galeri, acara kebudayaan dan acara sukan.

Berkaitan dengan cenderamata pula, kira-kira 81.6% responden membawa pulang cenderamata sebagai tanda kenangan mereka semasa berada di Sabah, dan 35.3% daripada mereka menyediakan bajet berbanding sebaliknya 38.8%, manakala 25.9% menyediakannya dalam keadaan tertentu.

Kategori Produk Cenderamata

Berdasarkan kepada kategori produk cenderamata, didapati sebanyak 43.0% responden sangat menggemari produk tempatan berikutan ciri-cirinya yang unik selain mewakili produk asal negeri Sabah sendiri. Terdapat 18.1% responden yang memilih imej bergambar sebagai cenderamata yang menarik untuk dibawa pulang ke negara asal. Imej bergambar adalah sebuah produk yang dapat memaparkan sesebuah destinasi yang dikunjungi di negeri ini. Pilihan ketiga ialah produk yang bercirikan aksesori dan hiasan, dan 16.9% dikesan disampaikan oleh responden kajian. Produk lain ialah cenderamata seperti *t-shirt*, topi dan lain-lain yang bergambar ataupun simbol negeri, barangan aksesori dan hiasan diri wanita (9.9%), pakaian dan fesyen (8.7%) serta hasil kerja tangan (8.1%) yang menarik. Keterangan lanjut, rujuk Jadual 1.2.



Carta 1.2: Kepuasan Terhadap Produk Cenderamata mata Tersenarai

Jadual 1.2: Kategori Produk Cenderamata Terpilih

Variabel	Kategori	Respon		% Kes
		N	(%)	
Produk Cenderamata Pilihan[a]	Imej bergambar	38	18.1	34.5
	Produk tempatan	74	43.0	75.5
	Aksesori & hiasan	29	16.9	29.6
	Pakaian & fesyen	15	8.7	15.3
	Aksesori & hiasan wanita	17	9.9	17.3
	Cenderamata (t-shirt/topi etc)	23	13.4	23.5
	Hasil kerja tangan	14	8.1	14.3
Jumlah		**172**	**100.0**	**175.5**

a Dichotomy group tabulated at value 1.[a]

Jenis-jenis Produk Cenderamata

Dalam isu berkaitan jenis-jenis cenderamata yang turut disampaikan kepada para responden, didapati makanan tempatan dan produk mini seperti *key chain*, *bumper*, *sticker* dan lain-lain secara puratanya menjadi pilihan utama serta berkemungkinan responden untuk membelinya. Nilai min atau *mean* bagi kedua-dua jenis produk masing-masing sebanyak 3.64 dan 3.07. Selain itu, jenis cenderamata yang menjadi pilihan responden berikutnya ialah poskad bergambar (2.98), kraftangan (2.94), buku info destinasi (2.84), t-shirt (2.79), produk seni (2.79), batik (2.64), produk kulit (2.56), dan produk terkumpul (2.51). Keterangan lanjut, rujuk Jadual 1.3.

Jadual 1.3: Kebarangkalian Membeli Cenderamata

Variabel	Jenis-jenis	Respon	
		N	(Min)
Kebarangkalian Membeli Jenis-jenis Cenderamata	Poskad	107	2.95
	Seramik	101	2.08
	Ukiran kayu	105	2.43
	Piuter	98	2.07
	Produk perak	101	2.22
	Produk berasaskan hutan	102	2.32
	Barangan antik	100	2.36
	Makanan tempatan	107	3.65

	Buku info destinasi	103	2.86
	T-shirt	103	2.79
	Produk terkumpul	99	2.51
	Produk seni	102	2.78
	Produk kulit	100	2.56
	Produk tenunan	100	2.32
	Sulaman songket	98	2.32
	Kraftangan	103	2.95
	Batik	100	2.68
	Mainan kanak-kanak	97	2.44
	Produk mini ie. *pen, key chain, bumper stickers*	96	3.07

Kepuasan Terhadap Produk Cenderamata

Apakah senarai cenderamata tersebut di atas memenuhi keinginan responden? 89.1% responden berpuas hati dengan jenis-jenis cenderamata yang disenaraikan di atas. Namun sebanyak 10.9% pula masih belum berpuas hati dengan jenis cenderamata berkenaan.

Bagi responden yang tidak berpuas hati, mereka berpendapat cenderamata yang amat sesuai dengan keinginan mereka ialah sebuah produk yang bercirikan tradisional dan mudah dibawa. Berikutnya cenderamata itu mestilah bernilai untuk keluarga dan kawan-kawan mereka, bercorak menarik, produk kesukaan mereka, produk tulin, banyak kegunaan, berkualiti tinggi, unik dan terhad, dan harga berpatutan. Keterangan lanjut, rujuk carta 1.2.

Ciri-Ciri Produk Cenderamata Pilihan

Ciri-ciri produk cenderamata yang menjadi pilihan kebanyakan responden secara puratanya ialah produk tersebut mestilah mempunyai ciri-ciri tradisional (4.06); mudah dibawa (3.91); dan bernilai untuk keluarga/rakan (3.89). Ini diikuti oleh produk ciri-ciri berikut iaitu barangan yang mempunyai corak yang menarik (3.88); barangan tulen (3.82); harga berpatutan (3.81); banyak kegunaan (3.79); berkualiti tinggi (3.70) dan unik/edisi terhad (3.66). Keterangan lanjut, rujuk Jadual 1.4.

Jadual 1.4: Ciri-Ciri Produk Cenderamata Pilihan

Variabel	**Ciri-ciri**	**Respon**	
		N	(Min)
Ciri-ciri Produk Cenderamata Pilihan	Kualiti tinggi	99	3.70
	Corak menarik	100	3.88

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	Banyak kegunaan	102	3.79
	Mudah dibawa	99	3.92
	Tradisional	99	4.06
	Ketulenan	102	3.79
	Bernilai untuk keluarga/rakan	98	3.66
	Harga berpatutan	97	3.81
	Kesukaan	101	3.79
	Unik/edisi terhad	97	3.88

Ciri-ciri Kedai Cenderamata

Berdasarkan ciri-ciri kedai cenderamata yang menjadi pilihan untuk dikunjungi, didapati bahawa secara purata responden berpendapat bahawa ciri-ciri yang amat penting bagi sesebuah kedai cenderamata ialah membenarkan pelanggan mencuba (4.07) produk yang ditawarkan tersebut. Ini perlu kerana akan dapat meningkatkan keyakinan pembeli terhadap sesebuah produk berkenaan. Ciri-ciri penting lain yang juga perlu ada pada sebuah kedai cenderamata ialah keselamatan semasa berbelanja (3.99), pengetahuan juru jual yang tinggi berkaitan produk (3.99), juru jual yang peramah (3.92), harga yang berpatutan (3.86), dan produk berkualiti tinggi (.65). Selain itu, suasana dalaman kedai yang menarik (3.60), mempunyai pelbagai pilihan (3.57), teknik memperagakan produk (3.53), barangan dipamer (3.53), lokasi dekat tarikan pelancong (3.49), kedai bercirikan tradisional (3.18), dan lokasi di laluan pejalan kaki (3.14) juga adalah ciri-ciri kedai yang berkemungkinan tinggi dikunjungi oleh responden. Sementara ciri-ciri kedai yang kurang penting pula seperti kedai cenderamata yang berpenampilan moden. Keterangan lanjut, rujuk Jadual 1.5.

Jadual 1.5: Ciri-ciri Kedai Cenderamata Pilihan

Variabel	Ciri-ciri	Respon	
		N	(Min)
Ciri-ciri Kedai Cenderamata Pilihan	Lokasi dekat tarikan pelancong	99	3.49
	Lokasi laluan pejalan kaki	95	3.14
	Ketrampilan kedai yang moden	95	2.76
	Ketrampilan kedai berciri tradisional	95	3.18
	Dalaman kedai yang menarik	98	3.60
	Keselamatan semasa membeli-belah	101	3.99
	Harga yang berpatutan	100	3.86
	Juru jual yang peramah	96	3.93

(ISBN: 978-967-15744-3-0)

	Membenarkan pelanggan mencuba	97	4.07
	Barangan dipamer	95	3.53
	Mempunyai pelbagai pilihan	94	3.57
	Teknik memperagakan produk	98	3.53
	Produk berkualiti tinggi	96	3.65
	Pengetahuan juru jual yang tinggi terhadap produk	92	3.99

Tujuan Pembelian Cenderamata

Dalam aspek tujuan pembelian cenderamata, diketahui bahawa secara purata responden membeli cenderamata adalah untuk keperluan sendiri manakala (4.71). Diikuti untuk diberi kepada teman lelaki/wanita (4.12). Seterusnya, untuk diberikan kepada rakan-rakan (4.03), ahli keluarga (4.00), dan lain-lain yang tidak tersenarai di dalam jadual (3.93). Tujuan lain yang menjadi pertimbangan para responden ialah untuk ketua jabatan (3.77), saudara mara (3.72), dan jiran (3.64). Keterangan lanjut, rujuk Jadual 1.6.

Jadual 1.6: Tujuan Pembelian Cenderamata

Variabel	Tujuan		Respon	
			N	(Min)
Pembelian Cenderamata oleh pelancong	1.	Diri sendiri	108	4.71
	2.	Rakan-rakan	102	4.03
	3.	Ahli keluarga	98	4.00
	4.	Ketua jabatan	93	3.77
	5.	Saudara mara	95	3.72
	6.	Jiran	95	3.64
	7.	Teman lelaki/wanita	94	4.12
	8.	Lain-lain	86	3.93

Rumusan

Dapat dirumuskan bahawa profil responden kajian adalah lebih ramai wanita, kategori umur 49.1% lebih dominan, manakala 52.1% datang dari Eropah dan Amerika Syarikat. Turut ditemukan 50% responden bekerja sebagai eksekutif dan perkeranian. Responden yang terlibat kajian, majoritinya baru pertama kali berkunjung ke negei ini sementara tempoh lawatan responden lebih kurang *mean* 11.12 hari dan *mode* 7.0 hari. Tujuan responden

berkunjung ke Sabah ialah kerana bercuti di samping urusan perniagaan (3.4%). Kebanyakan responden membawa pulang cenderamata yang dibeli di Sabah dan hanya 35.3% sahaja responden menyediakan bajet untuk hal tersebut manakala 25.9% menyediakan sekiranya perlu.

Jenis produk yang sangat digemari oleh responden ialah makanan tempatan yang berupa produk kering merupakan pilihan utama responden diikuti produk mini seperti *key chain, pen, bumper sticker* dan lain-lain, dan poskad serta kraftangan. Selain daripada itu, ciri-ciri cenderamata yang perlu ada agar responden berminat untuk membelinya ialah produk mesti berciri tradisional, mudah dibawa, corak yang menarik, dan unik/edisi terhad.

Bagi ciri-ciri kedai cenderamata pula, responden amat tertarik dengan pengetahuan juru jual yang tinggi terhadap produk. Keselamatan semasa membeli-belah juga perlu diberi perhatian oleh pemilik kedai selain juru jual yang peramah dan harga yang berpatutan. Kajian juga mendapati responden membeli untuk keperluan sendiri selain untuk diberikan kepada teman lelaki/wanita, rakan-rakan, dan ahli keluarga.

Rekomendasi

Bertumpu kepada produk yang sesuai dengan keadaan bercuti

Didapati kira-kira 90.5% pelancong yang datang berkunjung ke negeri ini adalah semata-mata untuk bercuti, manakala urusan lain mempunyai bilangan yang agak kecil. Urusan lain itu seperti berniaga (3.4%), melawat kawan dan saudara (1.7%), lain-lain (1.7%), sukan (0.9%) dan akademik (0.9%).

Sehubungan itu, dicadangkan agar para pengusaha menghasilkan produk cenderamata yang sesuai dengan keperluan dan mood cuti para pelancong. Walau bagaimanapun, kajian lanjutan adalah diperlukan untuk mendapatkan maklumbalas berhubung jenis dan ciri-ciri produk yang diperlukan ketika bercuti.

Keutamaan industri kepada kategori produk yang berciri tempatan, imej bergambar dan aksesori lokal

Kajian mendapati pelancong menyukai produk cenderamata yang bercirikan tempatan berikutan negeri Sabah merupakan lokasi yang menarik dan eksotik bagi pelancong Eropah dan Asia. Selain itu, pelancong juga berminat dengan produk bagi kategori bergambar dan 26.4% aksesori dan hiasan. Adalah dicadangkan dicadangkan kepada pengiat industry bahawa produk bercirikan tempatan, berimejkan gambar dan aksesori dan hiasan perlu diberi perhatian serius khususnya dalam aspek pengeluaran dan reka bentuk. Ciri-ciri itu antaranya seperti kraftangan etnik, cenderamata berimejkan gunung kinabalu, Urang Utan, pulau Mabul, pulau Sipadan, Menara Tun Mustapha dan lain-lain. Aksesori lain yang bercirikan tempatan seperti hiasan wanita, *key chain*, *pen* dan lain-lain. Ini penting kerana produk yang bernuansa tempatan akan memberi nilai tambah kepada cenderamata yang dibeli oleh para pelancong yang berkunjung ke Sabah. Pada masa yang sama, ianya boleh mengurangkan kemasukkan produk cenderamata dari negara-negara jiran ke negeri ini.

Meningkatkan pengeluaran produk dari jenis makanan kering dan produk mini

Produk makanan tempatan, produk mini seperti *key chain, pen, bumper stickers* dan lain-lain, poskad dan kraftangan merupakan cenderamata yang diminati oleh pelancong. Kebarangkalian mereka membeli produk tersebut di atas adalah tinggi. Lantaran itu, penyelidik mencadangkan agar produk bagi makanan khususnya makanan kering ditingkatkan pengeluarannya berikutan permintaan yang besar dari kalangan pelancong. Demikian juga

tiga produk yang tersebut di atas iaitu produk mini, poskad dan kraftangan perlu juga dikeluarkan secara berterusan bagi memenuhi keperluan pasaran semasa.

Pengeluaran bertumpu kepada produk bercirikan tradisional

Kajian mendapati bahawa produk tempatan yang bercirikan tradisional menjadi pilihan pelancong. Ciri sedemikian merupakan kekuatan daripada sesebuah produk yang boleh membantu pelancong asing memahami negeri ini secara lebih dekat. Sehubungan itu, adalah dicadangkan agar para pengusaha cenderamata perlu memberi tumpuan terhadap ciri-ciri produk seperti yang dinyatakan di atas. Cenderamata bercirikan tradisional amat penting memandangkan negeri Sabah kaya akan kepelbagaian etnik dan budaya yang boleh diangkat sebagai ikon produk berkualiti. Budaya unik suku Kadazandusun, Murut, Sungai, Rungus dan beberapa suku lainnya dapat ditonjolkan sebagai imej sesebuah produk cenderamata yang unggul. Negeri ini juga kaya akan flora dan fauna yang selalu menjadi unggulan tradisi bagi Sabah. Nuansa tradisional bagi sesebuah produk amat membantu meningkatkan nilai pasaran tempatan selain boleh menjadi duta produk bagi negeri Sabah.

Fokus kepada produk khusus yang mudah dibawa, menarik dan bernilai

Selain bercirikan tradisional, cenderamata yang mudah dibawa, bernilai untuk keluarga dan rakan, dan produk yang menarik turut menjadi perhatian pelancong. Ciri-ciri sedemikian amat penting kepada pelancong dan kombinasi ketiga-tiga ciri di atas boleh menjadikan sesebuah produk itu popular dan menarik minat pelancong untuk membelinya. Oleh yang demikian, tumpuan kepada produk cenderamata yang bercirikan seperti di atas adalah perlu diberi perhatian oleh pemain industri dan pengusaha.

Memantapkan pengetahuan tentang produk di kalangan juru-juru jual produk

Kajian mendapati pengetahuan dan keramahan juru-juru jual amat penting untuk menarik perhatian pelancong membeli di outlet-outlet yang tersedia. Juru-juru jual perlu mengetahui setiap jenis produk yang mereka jual serta memberi maklumat penuh mengenai produk berkenaan kepada pelancong. Ianya termasuk pengetahuan berkaitan kandungan sesuatu produk, material, tempoh membuat, jangka hayat, lokasi kilang dan sebagainya. Ini juga merupakan salah satu strategi berkesan dalam mempromosi produk-produk cenderamata kepada pelancong. Sehubungan itu, dicadangkan para pemain industri dan persatuan pengusaha cenderamata menjalankan kursus-kursus khusus berkaitan juru-juru jual outlet cenderamata ini. Juru-juru jual yang berpengetahuan dan ramah amat berkesan meningkatkan jualan produk di kalangan pelancong.

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PENGARUH IKLIM SEKOLAH, KOMITMEN GURU, MOTIVASI GURU DAN KEPUASAN KERJA GURU TERHADAP PRESTASI KERJA GURU: SATU KAJIAN RINTIS

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***Abstrak**: Fokus utama artikel ini adalah untuk membincangkan dapatan kajian rintis mengenai "Pengaruh Iklim Sekolah, Komitmen Guru, Motivasi Guru dan Kepuasan Kerja Guru terhadap Prestasi Guru" yang dijalankan di tiga buah sekolah menengah Daerah Betong yang juga merupakan sekolah pedalaman yang terletak dalam Bahagian Betong, Sarawak. Seramai 162 guru sekolah menengah terlibat dalam kajian rintis ini. Instrumen yang digunakan ialah Organizational Climate Description Questionnaire- Rutgers Secondary (OCDQ-RS) digunakan untuk mengukur iklim sekolah, Organizational Commitment Questionnaire (OCQ) untuk mengukur komitmen guru, The Work Tasks Motivation Scale for Teachers (WTMST) untuk mengukur motivasi guru, Minnesota Statisfaction Questionnaire (MSQ) untuk mengukur kepuasan kerja guru dan Teachers' Job Performance Self-rating quesionnaire (TJPSQ) untuk mengukur prestasi kerja guru. Back-to-Back Translation telah dilakukan untuk WTMST dan TJPSQ. Kesahan yang telah digunakan ialah kesahan muka dan kesahan kandungan yang telah melibatkan lima orang pakar. Kesahan gagasan iaitu Analisis faktor pula dijalankan menggunakan Statistical Package of Social Sciences (SPSS) Versi 21.0 dan model pengukuran PLS-SEM bersama SmartPLS versi 3.2.7. Nilai kesahan dan kebolehpercayaan iaitu Muatan Luaran (>0.6), AVE (>0.5), Kebolehpercayaan Komposit dan Cronbach's Alpha adalah (>0.7), dan Kesahan Diskriminan berdasarkan Kriteria Fornell-Larcker (nilai laten melebihi korelasi antara laten) dan Heterotrait-monotrait ratio of correlations (HTMT) telah dipenuhi. Keputusan kesahan dan kebolehpercayaan yang diperolehi menunjukkan instrumen adalah sesuai digunakan untuk kajian sebenar.*

***Keywords:** Iklim Sekolah, Komitmen Guru, Motivasi Guru, Kepuasan Kerja Guru, dan Prestasi Kerja Guru*

Pengenalan

Pendidikan adalah salah satu alat penting untuk untuk memastikan bahawa seluruh generasi memperoleh kemahiran, pengetahuan dan sikap yang dikehendaki yang penting untuk kelangsungan masa depan (Ombuya, 2015). Kelengkapan diri dengan pelbagai kemahiran Pembelajaran Abad ke-21 (PAK21) seperti kemahiran pemikiran kritis dan

kreativiti, kemahiran komunikasi dan kolaboratif serta penerapan nilai murni dan etika dapat menjadikan prestasi dan mutu kerja seseorang guru itu meningkat (Mehmood *et al*., 2013; Nurul Hudani Md. Nawi *et al*., 2013). Guru merupakan aspek yang penting di dalam sesebuah institusi pendidikan di mana mereka memainkan peranan utama sebagai penyampai ilmu dan pengetahuan ini kemudiannya adalah sangat penting sebagai ukuran bagi pembangunan bagi sesebuah masyarakat (Siti Noor Ismail, 2011).

Kajian mendapati bahawa sekolah-sekolah dengan keadaan kerja keseluruhan yang lebih baik juga cenderung mempunyai pencapaian pelajar yang lebih tinggi dalam seni bahasa matematik dan bahasa Inggeris (Johnson *et al.*, 2012). Prestasi kerja bergantung kepada persekitaran di mana pekerjaan itu dilakukan (Herzberg, 1996 dipetik dalam Nias 1981.). Persekitaran kerja guru adalah kurang baik (Zombwe, 2007) dan mempunyai pengaruh motivasi dan kepuasan pekerja yang akan mengakibatkan prestasi kurang baik. Ramai penyelidik menyatakan bahawa hubungan positif antara komitmen dan prestasi organisasi tidak disokong (Jing, 2010, Mathieu dan Zajac, 1990, Williams dan Anderson, 1991). Sebagai contoh, beberapa penyelidik, Caruana *et al*. (1997), Keller (1997), dan Meyer *et al.* (2002) menunjukkan bahawa hubungan antara komitmen dan prestasi organisasi lebih jelas dan menunjukkan hubungan yang lemah. Khususnya, Meyer *et al.* (2002) mendedahkan bahawa komitmen organisasi tidak berkaitan dengan prestasi. Kajian Mustafa dan Othman (2010) menyelidik persepsi para guru sekolah tentang kesan motivasi terhadap prestasi mereka di tempat kerja. Mereka mendapati bahawa terdapat hubungan positif antara motivasi dan prestasi kerja guru, iaitu, tahap motivasi yang lebih tinggi akan menjadi prestasi kerja guru atau jika memberi motivasi tinggi kepada guru maka prestasi kerja mereka akan bertambah tinggi.

Tujuan Kajian

Kajian rintis ini bertujuan untuk menguji kesahan dan kebolehpercayaan instrumen yang telah diadaptasi. Kebolehpercayaan instrumen dinilai dari aspek kesahan gagasan, kebolehpercayaan indikator, ketekalan dalaman, kesahan konvergen dan kesahan diskriminan.

Reka Bentuk Kajian Dan Metodologi

Kajian ini menggunakan penyelidikan kuantitatif iaitu data dikumpulkan semasa tinjauan dengan mengedarkan soal selidik kepada guru-guru sekolah menengah di tiga buah sekolah menengah Daerah Betong yang juga merupakan sekolah pedalaman yang terletak dalam Bahagian Betong iaitu Sekolah Menengah Kebangsaan Datuk Patinggi Kedit, Sekolah Menengah Kebangsaan Ulu Layar dan Sekolah Menengah Kebangsaan Saribas. Daripada 180 borang soal selidik yang diedarkan, hanya seramai 162 orang guru sahaja yang menghantar borang soal selidik. Persampelan rawak mudah digunakan oleh penyelidik bagi memilih responden kajian.

Instrumen Soal Selidik

Dalam kajian ini, *Organizational Climate Description Questionnaire- Rutgers Secondary* (OCDQ-RS) yang dibina oleh Hoy *et al.* (1991) diadaptasi daripada Norhannan (2016) yang mempunyai 15 item. *OCDQ-RS* dibina untuk mengukur iklim peringkat sekolah menengah. Komitmen Guru diukur menggunakan instrumen *Organizational Commitment Questionnaire (OCQ)* yang mempunyai adalah skala 24 item yang dihasilkan oleh Mowday, Steers and Porter (1979). Dalam kajian ini, instrumen ini telah diadaptasi oleh Teh (2017). Motivasi Guru pula diukur menggunakan instrumen *The Work Tasks Motivation Scale for*

Teachers (WTMST) yang mempunyai adalah skala 15 item yang dihasilkan oleh Fernet, Senecal, Guay, Marsh, and Dowson (2008) terdiri daripada tiga tugas tugas kerja yang diadaptasi daripada Meredith (2017). Instrumen *Minnesota Statisfaction Questionnaire (MSQ)* pula digunakan untuk mengukur kepuasan kerja guru dalam kajian ini yang mengukur kepuasan kerja keseluruhan yang merangkumi 20 item penting kepuasan kerja guru. Soal selidik ini telah dibangunkan oleh Weiss, *et al*. (1967) yang telah diterjemahkan oleh Universiti Putra Malaysia (1977). *Teachers' Job Performance Self-rating quesionnaire (TJPSQ)* yang dibangunkan oleh Amin, Shah dan Atta (2013) untuk mengukur prestasi kerja guru dan diadaptasi oleh Khairi, Norhisham dan Asbi (2016) yang merangkumi 21 item.

Back-To Back Translations, Kesahan Muka Dan Kesahan Kandungan

Dalam kajian ini pengkaji telah melantik empat orang pakar. Mereka ialah ketua panitia bahasa Inggeris, ketua panitia Bahasa Melayu. seorang penyemak SPM Bahasa Inggeris yang berkelulusan B.Ed TESL (Hons) dari UNIMAS dan Masters In Education (Pedagody) dari UPSI. Kemudiannya pakar-pakar bahasa di *Lyn Edu Consultant* juga telah membantu melakukan penterjemahan agar dapat memurnikan soal selidik yang digunakan dalam kajian ini.. Dalam kajian ini kesahan muka dan kesahan kandungan dilakukan oleh Penyelidik telah menggunakan khidmat 5 orang pakar untuk mengesahkan instrumen yang telah dibina. Pakar-pakar yang dipilih ialah 3 orang pensyarah daripada Universiti Malaysia Sabah (UMS), Pengarah Kolej Teknik Vokasional, Betong, Sarawak, dan Penolong Kanan Pentadbiran 1 di SMK Lubok Antu yang juga merupakan Pengetua SMK Ulu Balingian, Sibu, Sarawak sekarang.

Ujian Kenormalan Data Kajian Rintis

Ujian kenormalan data juga akan dilakukan untuk setiap indikator. Hair, Sarstedt, Ringle dan Mena (2012) mengesyorkan agar data diperiksa untuk menentukan data seboleh-bolehnya ditabur secara normal. Kline (2011) menerangkan bahawa nilai *skewness* lebih daripada 3 dan nilai *kurtosis* lebih daripada 10 akan memberikan masalah. Jadual 1 menunjukkan bahawa nilai *skewness* kesemuanya di bawah 3.0 dan nilai *kurtosis* juga kurang daripada 3.0. Justeru, taburan data dalam kajian ini mempunyai kenormalan yang baik.

Dapatan Kajian Rintis

Keputusan Analisis Faktor Soal Selidik

Keputusan analisis faktor adalah menggunakan kaedah *extraction of principal component* dengan *varimax rotation* dijalankan ke atas 15 item yang mengukur konstruk iklim sekolah, 16 item yang mengukur konstruk komitmen guru, 18 item yang mengukur konstruk motivasi guru, 18 item yang mengukur konstruk kepuasan kerja guru dan 22 item yang mengukur konstruk prestasi kerja guru. Keputusan dalam Jadual 1 menunjukkan nilai *Barlett's Test of Sphericity* adalah signifikan iaitu $p=.000$ ($p<.05$). Selain itu, pengukuran bagi ketetapan sampel menggunakan *Kaiser-Meyer-Olkin* (KMO) adalah baik kerana memenuhi nilai yang ditetapkan iaitu 0.6 (Awang, 2012). Kelima-lima keputusan ini (*Barlett's Test* adalah signifikan dan KMO>0.6) menunjukkan bahawa data ini sesuai untuk diteruskan dengan prosedur pengurangan data berikutnya (Awang, 2012).

Jadual 1: Nilai Kaiser Meyer Olkin dan Signifikan Konstruk

Konstruk	*Kaiser-Meyer-Olkin Measure of Sampling Adequacy*	*Bartlett's Test of Sphericity*		
		Approx. Chi-Square	*df*	*Sig.*
Iklim Sekolah	.907	2002.135	105	.000
Komitmen Guru	.888	1849.411	120	.000
Motivasi Guru	.895	2195.711	153	.000
Kepuasan Kerja Guru	.915	2170.262	153	.000
Prestasi Kerja Guru	.886	2197.267	231	.000

Keputusan dimensi atau Komponen dan Total Variance Explained

Keputusan dimensi atau Komponen dan *Total Variance Explained* Iklim Sekolah berdasarkan nilai *Eigenvalue* lebih besar dari 1.0. Jumlah keseluruhan varians bagi mengukur konstruk iklim sekolah ini adalah 71.665%, konstruk komitmen guru adalah 69.655%, konstruk motivasi guru ini adalah 67.998%, konstruk kepuasan kerja guru ini adalah 62.579% dan konstruk prestasi kerja guru ini adalah 69.757%. Keputusan menunjukkan bahawa bilangan komponen dan item bagi setiap komponen adalah bersesuaian untuk mengukur konstruk iklim sekolah kerana jumlah varians keseluruhannya adalah sekurang-kurangnya 50% (Merenda, 1997).

Keputusan bagi Pembahagian Dimensi atau Komponen

Seterusnya adalah keputusan bagi pembahagian dimensi atau komponen. Dapatan menunjukkan dua dimensi atau komponen yang terbentuk ke atas 14 item iklim sekolah, tiga dimensi atau komponen yang terbentuk ke atas 16 item komitmen guru, tiga dimensi atau komponen yang terbentuk ke atas 15 item motivasi guru, dua dimensi atau komponen yang terbentuk ke atas 18 item kepuasan kerja guru dan 22 item yang mengukur konstruk prestasi kerja guru. Menurut Hair et al. (2010), item hendaklah menunjukkan nilai *factor loading* melebihi 0.4 dan nilai *communality* melebihi 0.3. Dapatan juga menunjukkan Nilai *factor loading* bagi salah satu item adalah melebihi 0.4 dan nilai komunaliti setiap item juga melebihi 0.3. Oleh itu, semua item adalah memenuhi syarat dan tiada item lagi yang akan disingkirkan.

Keputusan Analisis Cronbach s Alpha

Seterusnya, analisis Cronbach's Alpha akan dijalankan.Nilai pekali *Cronbach's Alpha* bagi keseluruhan item untuk iklim sekolah ialah .941, komitmen guru ialah .934, motivasi guru ialah .941, kepuasan kerja guru ialah .950 dan prestasi kerja guru ialah .923. Dapatan ini menunjukkan hasil analisis mempunyai tahap yang tinggi kerana melebihi .70 (Nunally, 1978).

Kebolehpercayaan Indikator, Ketekalan Dalaman, dan Kesahan Konvergen Kajian Rintis

Jadual 2 menunjukkan rumusan kesahan dan kebolehpercayaan indikator dan konstruk yang telah dianalisis dengan PLS algoritma untuk skala iklim sekolah, komitmen guru, motivasi guru, kepuasan kerja guru dan prestasi kerja guru. Dapatan menunjukkan bahawa kebolehpercayaan indikator, ketekalan dalaman, kesahan konstruk dan kesahan konvergen selepas pengguguran item boleh diterima. Berdasarkan Jadual 2 ini juga, nilai *factor loading* (>0.60) boleh diterima atau dikekalkan (Hair *et al.*, 2017; 2014) kerana nilai AVE (>0.50), kebolehpercayaan komposit (>0.70) dan *Cronbach's Alpha* (>0.70) masing-masing telah

dipenuhi. Nilai AVE perlu melebihi 0.50 (Fornell & Larcker, 1981) dan keputusan menunjukkan AVE> 0.50. Oleh itu, kebolehpercayaan komposit dan *Cronbach's Alpha* dalam *internal consistency reliability* (Nunally & Bernstein, 1994) dan *individual item realiability* (Hair et al., 2017; 2014) telah dipenuhi dalam kajian rintis ini khususnya kesahan konvergen.

.

Jadual 2: Rumusan Kesahan dan Kebolehpercayaan Skala Kajian Rintis

Konstruk	Muatan Luaran (OL) (>.6)	AVE (>.5)	CR (>.7)	Cronbach's Alpha (>.7)
Iklim Sekolah	.716	.567	.948	.941
Komitmen Guru	.683	.537	.942	0.935
Motivasi Guru	.695	.511	.943	0.939
Kepuasan Kerja Guru	.783	.529	.940	0.941
Prestasi Kerja Guru	.633	.508	.943	0.935

Kesahan diskriminan dengan Kriteria Fornell-Larcker

Kesahan diskriminan ditentukan melalui nilai kriteria *Fornell-Larcker* dan nisbah HTMT. Jadual 3 menunjukkan dapatan kajian untuk Fornell-Lacker menunjukkan nilai korelasi digandaduakan (nilai paling atas dan paling kanan) adalah sentiasa lebih besar daripada nilai di bawah dan ke kiri untuk setiap konstruk. Ini menunjukkan kesahan diskriminan yang diterima (Fornell & Larcker,1981).

Jadual 3: Kesahan Diskrimiman dengan Kriteria Fornell-Larcker

Konstruk	Iklim Sekolah	Kepuasan Kerja Guru	Komitmen Guru	Motivasi Guru	Prestasi Kerja Guru
Iklim Sekolah	0.753				
Kepuasan Kerja Guru	-0.016	0.727			
Komitmen Guru	-0.274	0.209	0.733		
Motivasi Guru	0.085	0.098	0.157	0.715	
Prestasi Kerja Guru	-0.316	-0.153	0.277	-0.110	0.713

Kesahan Diskrimiman dengan Heterotrait-monotrait ratio of correlations (HTMT)

Jadual 4 menunjukkan nisbah HTMT untuk setiap konstruk. Kesemua nilai nisbah HTMT menunjukkan nilai di bawah 0.850 dan dengan itu, menunjukkan kesahan diskriminan yang baik. Oleh itu, ini mengesahkan bahawa konstruk mempunyai kesahan diskriminan yang diterima (Fornell & Larcker,1981).

Jadual 4: Kesahan Diskriminan dengan Nisbah HTMT

Konstruk	Iklim Sekolah	Kepuasan Kerja Guru	Komitmen Guru	Motivasi Guru	Prestasi Kerja Guru
Iklim Sekolah					
Kepuasan Kerja Guru	0.178				
Komitmen Guru	0.288	0.257			
Motivasi Guru	0.137	0.195	0.213		
Prestasi Kerja Guru	0.320	0.143	0.255	0.116	

Perbincangan

Hasil dapatan kajian rintis ini mencadangkan 74 item yang dapat mengukur 5 konstruk adalah signifikan dan sesuai untuk dilaksanakan dalam kajian sebenar khususnya pengaruh iklim sekolah, komitmen guru, motivasi guru, kepuasan kerja guru terhadap prestasi kerja guru 74

item tersebut terdiri daripada iklim sekolah yang merangkumi 14 item, komitmen guru yang merangkumi 14 item, motivasi guru yang merangkumi 16 item, kepuasan kerja guru yang merangkumi 14 item dan prestasi kerja guru yang merangkumi 16 item.

Kesimpulan

Instrumen ini telah diuji melalui ujian rintis yang telah dirangka dengan bersistematik dan teratur. Setelah menjalani kesahan muka dan kesahan kandungan, kesahan gagasan iaitu analisis faktor menunjukkan instrumen mempunyai nilai kebolehpercayaan yang tinggi. Dapatan kajian juga mendapati keputusan model pengukuran PLS-SEM menunjukkan mempunyai nilai kesahan dan kebolehpercayaan iaitu Muatan Luaran adalah melebihi nilai 0.6, kesahan konvergen berdasarkan nilai AVE yang melebihi nilai 0.5, Kebolehpercayaan Komposit dan *Cronbach's Alpha* melebihi nilai 0.7, dan Kesahan Diskriminan berdasarkan Kriteria *Fornell-Larcker* (nilai laten melebihi korelasi antara laten) dan *Heterotrait-monotrait ratio of correlations* (HTMT) telah dipenuhi. Dapatan kajian menunjukkan instrumen adalah sesuai digunakan untuk kajian sebenar.

Keaslian/Nilai

Instrumen soal selidik yang akan digunakan oleh penyelidik untuk kajian sebenar telah melalui proses kesahan muka, kesahan kandungan, kesahan gagasan, kebolehpercayaan indikator iaitu muatan luaran, ketekalan dalaman iaitu analisis kebolehpercayaan komposit dan *Cronbach's Alpha* yang telah menunjukkan nilai kebolehpercayaan yang tinggi serta kesahan konvergen dan kesahan diskriminan.

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KEMAHIRAN BERFIKIR KRITIS MELALUI PERMAINAN DIGITAL DALAM PERSEKITARAN PEMBELAJARAN KONSTRUKTIVISME SOSIAL

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Abstrak : *Proses pelaksanaan transformasi pendidikan memerlukan pendekatan dan strategi baharu agar setiap pelajar mampu memiliki dan menguasai kemahiran yang diperlukan dalam abad ke-21. Oleh yang demikian untuk memastikan perkembangan kreativiti pendidik, kaedah dan strategi pengajaran dan pembelajaran yang dilaksanakan perlu mengambil kira kecenderungan, kebolehan serta kemampuan tahap kematangan pelajar dan berupaya berfikir pada aras yang lebih tinggi. Peningkatan populariti penggunaan teknologi komputer dan komunikasi dalam kehidupan seharian manusia terutamanya dalam simulasi dan permainan digital telah menarik minat pengkaji-pengkaji untuk mendalaminya yang dapat meningkatkan keupayaan dan memupuk kemahiran berfikir kritis dikalangan pelajar. Kertas konsep ini membincangkan potensi penggunaan permainan digital terhadap kemahiran berfikir kritis pelajar melalui persekitaran pembelajaran sosial konstruktivisma.*

Kata kunci*; permainan digital, kemahiran, persekitaran pembelajaran Konstruktivisme Sosial.*

Pengenalan

Proses pelaksanaan transformasi pendidikan memerlukan pendekatan dan strategi baharu agar setiap pelajar mampu memiliki dan menguasai kemahiran yang diperlukan dalam abad ke-21. Kementerian Pendidikan Malaysia (KPM) melalui Pelan Pembangunan Pendidikan Malaysia (PPPM) 2013-2025 mengfokuskan kepada enam aspirasi iaitu pengetahuan, kemahiran berfikir, kemahiran memimpin, kemahiran dwibahasa, etika dan kerohanian serta identiti nasional bagi setiap pelajar dalam mengharungi cabaran globalisasi, selari dengan prinsip dan Falsafah Pendidikan Kebangsaan.

Kajian Nurul Amirah & Zaidatun (2008) mendapati pendekatan bermain sambil belajar dapat meningkatkan keupayaan kognitif, keinginan untuk meneroka bagi memenuhi perasaan ingin tahu, kemahiran motor kasar dan halus, kemahiran inovatif, kritis dan kreatif serta membantu mengatasi perasaan bimbang dan tertekan. Bermain sambil belajar diselitkan dengan perkembangan teknologi masa kini merupakan satu budaya persekitaran dalam kalangan pelajar. Perkembangan dunia digital termasuklah permainan digital merupakan media interaksi persekitaran pembelajaran bercorak hiburan yang berkesan kerana memotivasikan pemain untuk kemahiran berfikir kritis dan kreatif dalam permainan (Kow et al., 2013). Peluang yang sedia ada ini kenapa tidak diaplikasikan semaksima yang mungkin.

Latar Belakang Masalah

Adalah menjadi hasrat bagi sebuah negara membangun seperti Malaysia untuk menjadi sebuah masyarakat saintifik, progresif, mempunyai daya perubahan yang tinggi dan berpandangan ke hadapan bukan hanya menjadi pengguna teknologi malah penyumbang kepada perkembangan saintifik dan teknologi masa kini (Heong et al., 2010). Melalui cabaran ini negara memerlukan penghasilan sumber manusia yang kreatif dan inovatif serta keupayaan terhadap kemahiran berfikir aras tinggi. Pelan Pembangunan Pendidikan Malaysia 2013- 2025 (KPM, 2013) dilancarkan dengan salah satu hasrat adalah setiap kanak-kanak akan menguasai pelbagai kemahiran kognitif yang penting, termasuk pemikiran kritis, penaakulan, pemikiran kreatif dan inovasi. Ini memberi gambaran bahawa agenda sistem pendidikan memberi penekanan terhadap generasi yang memiliki kemahiran abad ke 21 termasuk kemahiran berfikir kritis yang mampu bersaing diperingkat global.

Pembentukan kemahiran berfikir kritis seharusnya dititikberatkan dalam proses PdP di dalam kelas. Bagimanapun ini sangat berbeza dalam PdP tradisional, pengajar menyalurkan pengetahuan seberapa banyak yang boleh kepada pelajar. Mengapa perkara ini berlaku? Adakah pengajar lebih menitikberatkan isi kandungan atau masih kabur tentang kemahiran berfikir kritis.

Banyak kajian membuktikan bahawa pelajar-pelajar kita kurang mampu untuk berfikir secara kritis dalam konteks di luar akademik walaupun cemerlang dalam bilik darjah (Abu Bakar Nordin, 2013; Ainon Mohd & Abdullah Hassan, 2005). Setiap tahun pusat-pusat kecermelangan ilmu melahirkan ribuan graduan yang cemerlang namun tidak dapat memenuhi keperluan pasaran pekerjaan ekoran ketidakupayaan mengaplikasikan kemahiran berfikir kritis dalam situasi sebenar yang lebih kompleks dan pelbagai. Masalah ini timbul menurut dapatan kajian Mohamad Sattar Rasul, et.al (2009) bukannya masalah tiada pekerjaan tetapi adalah disebabkan wujudnya ketidaksepadanan antara kemahiran termasuklah kemahiran berfikir yang diperlukan oleh pasaran pekerjaan. Oleh yang demikian sesuatu perlu difikirkan dan dilakukan bagi menangani situasi dan kekurangan terhadap kemampuan dan keupayaan cara berfikir generasi abad ke 21 ini.

Kemahiran Berfikir Kritis

Berfikir merupakan aktiviti minda membuat keputusan dalam menyelesaikan masalah berdasarkan maklumat dan pengalaman yang sedia ada. Kemahiran berfikir adalah pengelolaan proses-proses mental yang berlaku dalam minda atau sistem kognitif (Heong et al., 2011). Selain membuat keputusan dan menyelesaikan masalah, berfikir juga bertujuan untuk mencari makna dan pemahaman terhadap sesuatu, eksplorasi terhadap pelbagai idea atau ciptaan dan membuat pertimbangan, dan seterusnya membuat refleksi dan metakognitif terhadap proses yang dialami. Oleh itu, kemahiran berfikir bersandarkan kepada keupayaan individu untuk mengendalikan potensi kecerdasan mindanya

Kemahiran berfikir adalah kemahiran mengolah operasi mental yang merangkumi pengetahuan, pengamatan dan penghasilan sesuatu (Bransford, et al., 1986). Malahan kemahiran berfikir merupakan suatu aktiviti bagi mengawal, menguasai dan menyesuaikan diri pada persekitaran yang sukar (Dewey, 1933).

Perkataan kritis bermakna kemampuan atau keupayaan menilai, mencari kelemahan, kesalahan, kesilapan untuk diperbetulkan agar sesuatu idea, kaedah, proses, prinsip, pendekatan menjadi lebih sempurna. Cara berfikir kritis bermanfaat untuk membantu individu tidak mengulangi kesilapan (Ainon Mohd & Abdullah Hassan, 2005). Penekanan terhadap kemahiran berfikir kritis telah diberi tumpuan sejak dua puluh tahun yang lalu dalam sistem pendidikan di

Malaysia. Pemikiran kritis dijadikan sebagai sebahagian daripada kemahiran asas pemerolehan ilmu dan kemahiran dalam mata pelajaran (Marlina Ali & Shaharom Noordin, 2010).

Hakikatnya pemikiran kritis boleh dilatih serta dikembangkan kerana pemikiran merupakan kemahiran yang boleh dibentuk dan dibaiki jika kaedahnya diketahui. Kajian oleh Roslina Ibrahim, et al., (2011) mendapati pelajar menunjukkan sikap positif terhadap perkembangan kognitif, berfikir secara kritis dan mencabar pemahaman mereka dengan menggunakan permainan digital sebagai pendekatan pembelajaran. Ini kerana disebabkan oleh ciri-ciri interaktiviti dan maklum balas serta merta dalam permainan digital.

Pelbagai strategi pembelajaran diperkenalkan bagi mengasah kemahiran berfikir kritis antaranya kajian kes, pembelajaran berasaskan senario, pembelajaran aktif, pembelajaran berpasukan, pembelajaran berasaskan masalah, pembelajaran berbantukan rakan, pembelajaran berasaskan bahan dan sebagainya. Walau bagaimanapun terdapat berapa cabaran dan halangan dalam proses pelaksanaan. Antaranya menurut Zaiton Abdul Majid et al., (2013) isu dan cabaran dalam pelaksanaan pendekatan kajian kes antaranya; hanya sesuai pada bidang teknikal, sains dan teknologi namun amat sukar bagi perbincangan yang melibatkan konsep, teori dan amalan; tidak selaras dengan sistem yang sedia ada dari segi peruntukan masa bagi satu-satu subjek; kerja-kerja tambahan kepada tenaga pengajar; dan pengetahuan teknikal yang khusus perlu diberikan kepada tenaga pengajar.

Kebanyakan pendekatan ini bersifat formal yang boleh menyebabkan pelajar hilang tumpuan. Evans, (1979) menyatakan bahawa perkara yang amat mencabar bagi seorang guru adalah mengekalkan dan menarik perhatian pelajar mengikuti sesi pembelajaran. Malah pelajar kini adalah generasi yang mempunyai tahap perhatian yang singkat semasa proses PdP (Mohamed Noor Hasan, et al., (2013). Oleh itu, strategi pembelajaran melalui permainan digital yang mana salah satu elemen penting adalah menekankan pengekalkan tumpuan pelajar sepanjang sesi PdP berjalan.

Pembelajaran Melalui Permainan

Permainan adalah alat interaksi sosial yang mampu merangsang pembelajaran dan perkembangan kognitif di awal pendidikan kanak-kanak ketahap yang optimum (Ad Nor Azli, 2014; Zakiah Mohamad Ashari et al., 2013). Melalui aktiviti bermain memberi peluang kepada kanak-kanak untuk proses penyusunan semula, penemuan baru, proses pengayaan, membinaan pengalaman dan pengetahuan serta penemuan konsep-konsep baru. Di samping itu, berupaya mengelakkan rasa bosan; meningkatkan dan mengekalkan tumpuan kanak-kanak terhadap mata pelajaran yang diajar; menceriakan dan menghidupkan suasana bilik darjah malah memberi makna yang luas kepada kanak-kanak sewaktu berinteraksi dengan suasana dan persekitarannya (Zakiah Mohamad Ashari et al., 2013). Pemahaman konsep baharu dan dilakukan secara berulang-ulang semasa bermain dan penguasaan terhadap konsep pada peringkat yang seterusnya (Sharifah Nor Puteh & Aliza Ali, 2011).

Selain itu pembelajaran melalui bermain dapat mempercepatkan pembelajaran serta memperkukuhkan lagi pembentukan konsep (Nor Azan Mat Zin, Azizah Jaafar, & Yue, 2009), di samping mempertingkatkan perkembangan individu mengikut kemajuan masing-masing terutama pelajar lemah akan dibantu oleh pelajar yang lebih pintar (Hsi, 2007). Kajian kes oleh Watson, Mong, & Harris, (2011) mendapati bahawa belajar melalui bermain akan mendatangkan keseronokkan dan hiburan serta merangsang individu mempelajari sesuatu melalui cara yang

aktif dalam cara yang tidak formal. Oleh itu aktiviti bermain memberi peluang kepada kanak-kanak membuat penerokaan dan interaksi dengan persekitaran (Roopnarine & Johnson, 2013).

Mempunyai kelonggaran masa disamping memberi peluang mencuba idea sendiri dan memberi peluang membuat pemerhatian dan tumpuan bagi mencari sesuatu jawapan.

Vygotsky menekankan permainan adalah pilihan kanak-kanak sendiri dan disokong oleh guru atau pun orang dewasa melalui perbincangan dan sesi soal jawab. Melalui bermain, kanak-kanak belajar berkomunikasi, menyesuaikan diri dengan persekitaran, berinteraksi dengan rakan dan mengenali benda-benda di sekeliling mereka (Sharifah Nor Puteh & Aliza Ali, 2011).

Oleh itu, selaras dengan peningkatan populariti penggunaan teknologi komputer dan komunikasi dalam kehidupan seharian manusia terutamanya dalam simulasi dan permainan komputer telah menarik minat pengkaji-pengkaji untuk mendalaminya. Contohnya dalam membuat keputusan dan latihan di bidang ketenteraan simulasi permainan digunakan secara meluas dengan tahap kejayaan boleh dibanggakan (Rystedt, 2002). Permainan komputer atau permainan digital dapat meningkatkan keupayaan dan memupuk kemahiran berfikir kritis dikalangan pelajar (Zurainu Mat Jasin & Abdull Sukor Shaari, 2012) sementara pendidik sebagai fasilitator menggalakkan kemahiran kritis.

Bermain permainan digital telah menjadi sebahagian kehidupan remaja pada masa kini seiring era teknologi komunikasi maklumat. Menurut Oblinger (2004), permainan digital telah diintegrasi dalam sosial dan budaya persekitaran kanak-kanak dan golongan remaja di mana mereka sering bermain permainan digital di rumah (Downes, 1999; Harris, 1999; Shazia Mumtaz, 2001). Prensky (2007) menyatakan bahawa ini merupakan satu perubahan cara pelajar-pelajar berinteraksi dengan persekitaran mereka dari segi fizikal dan sosial pada masa kini.

Dengan itu, bermain permainan digital boleh memberikan impak yang jelas terutama remaja yang berumur 12 hingga 17 tahun. Prensky (2001) percaya bahawa masalah dengan pendidikan hari ini ialah pendidik cuba untuk mendidik generasi baru dengan cara lama. Di Malaysia, kedua-dua pelajar sekolah rendah dan menengah mengakui bahawa mereka bermain permainan digital. Di kalangan responden ini, 96% daripada lelaki dan 90% daripada pelajar perempuan dilaporkan bermain permainan digital di dalam dan di luar kawasan sekolah (Rubijesmin Abdul Latif, 2007).

Amalan bermain permainan digital dapat memberikan kesan positif dalam penyelesaian masalah, pemikiran kritis dalam kalangan pelajar. Ini adalah kerana aspek permainan digital merangkumi pemilihan strategi dan menyelesaikan konflik serta masalah di mana berhubungkait dengan kemahiran berfikir seseorang (Kow et al., 2013). Malah dengan bermain permainan digital implimantasi kemahiran berfikir kritis pelajar bagi memperolehi dan mendapatkan jawapan penyelesaian terhadap halangan situasi dalam permainan digital (Yusoff et al., 2009).

Menurut Prensky (2007), kemahiran berfikir adalah kemahiran penyelesaian masalah, kreativiti dan kritis kurang penekanan dalam kurikulum sekolah, akan tetapi dapat dipelajari menerusi bermain permainan digital. Ini adalah kerana dalam bermain permainan digital, pelajar akan berdepan dengan cabaran untuk diatasi bagi mencapai matlamat yang diingini (Peter et al., 2013). Malah menurut (Yusoff, et al., 2010) setelah pelajar selesai satu tahap dalam situasi permainan, mereka akan lebih peka kepada keperluan untuk mencari strategi baru dengan ini menggalakkan kemahiran berfikir kritis.

Oleh yang demikian, idea dan konsep pengintergrasian dalam bidang pendidikan diperkenalkan iaitu permainan digital berasaskan pembelajaran untuk mengurangkan dan

meminimumkan kesan negatif permainan digital dikalangan pelajar. Minat pelajar terhadap permainan digital telah menarik profesion pendidikan untuk mengintegrasikan bermain permainan digital dalam persekitaran pembelajaran. Walaupun konsep integrasi permainan digital dalam pembelajaran kelihatan menarik, pelaksanaan idea ini adalah mencabar. Permainan dihasilkan semata-mata untuk kepentingan hiburan sedangkan pendidikan adalah untuk mengajar, pertimbangan yang teliti perlu dibuat ketika penggabungan kedua-dua domain (Nazirah Mat Sin et al., 2013).

Dalam satu kajian yang berbeza, pencapaian pelajar dalam fizik telah meningkat apabila belajar menggunakan pendekatan permainan digital untuk pembelajaran (Irfan Sadiq, 2010). Kajian yang dijalankan dalam keberkesanan permainan digital dalam sains komputer melaporkan bahawa permainan digital berpotensi dalam membantu pelajar untuk mempelajari pengetahuan konsep seperti konsep pembelajaran memori komputer (Nazirah Mat Sin et al., 2013).

Ini memberi gambaran bahawa permainan digital satu pendekatan baru dalam proses PdP yang selari dengan kehendak generasi kini lebih gemar dan selesa menggunakan komputer dan internet daripada membuka lembaran buku (Chaudhary, 2008). Tambahan pula, permainan digital mampu untuk membantu pelajar lebih memahami konsep yang kompleks menjadi lebih mudah (Chaudhary, 2008) dan penerapan kemahiran berfikir kritis, penyelesaian masalah, kreatif dan inovatif (Kamisah Osman & Nurul Aini Bakar, 2012). Permainan digital mempunyai potensi dalam pembelajaran kemahiraan abad ke 21 (Prensky, 2007). Di samping itu, permainan digital membuatkan pembelajaran menyeronokkan dan membantu mengekalkan perhatian dan kekal fokus.

Tetapi timbul permasalahan yang merisaukan ibu bapa dan masyarakat, pelajar yang gemar bermain permainan digital berdepan dengan masalah kurang kemahiran insaniah seperti kemahiran bersosial dan berkomunikasi (Roe & Muijs, 1998). Malah sukar untuk menyesuaikan diri dengan persekitaran. Untuk menangani kerisauan dan permasalahan ini perlunya sesuatu dilakukan dengan memasukkan ciri-ciri yang membantu pelajar membina pengetahuan secara aktif, melibatkan aktiviti kerjasama, berkolaborasi, bekerja dalam kumpulan. Cooper dan Robeson (2002) mendapati bahawa permainan digital akan lebih meningkatkan pemikiran kritis dalam persekitaran yang melibatkan yang lebih daripada seorang pemain atau lebih jelasnya permain secara berkolaborasi. Malahan untuk pembelajaran yang lebih bermakna dan efektif melalui permainan digital kandungan dan nilai pedagogi perlu diberi penekanan agar ciri-ciri menggalakkan kemahiran berfikir kritis dapat dikenalpasti.

Permainan Digital Dalam Persekitaran Pembelajaran Konstruktivisme

Teori Konstruktivisme merupakan teori pembelajaran di mana setiap pelajar digalakkan membina idea mereka sendiri. Teori ini merupakan hasil usaha ahli-ahli psikologi seperti Jerome Bruner, Jean Piaget dan Lev Vygotsky. Pendekatan pembelajaran konstruktivisme lebih terbuka dengan memberi banyak ruang dan peluang kepada pelajar untuk membina dan memperolehi sendiri ilmu pengetahuan (Zurainu Mat Jasin & Abdull Sukor Shaari, 2012).

Konstruktivisme adalah satu kaedah bagi pembangunan pengetahuan berdasarkan penyertaan aktif individu dalam penyelesaian masalah dan pemikiran kritikal. Aktiviti dan keterlibatan yang aktif membawa kepada kesempurnaan kefahaman dan minat yang besar terhadap mata pelajaran malah pelajar mempunyai peluang untuk melihat dan mengawal pemikiran mereka. Pendekatan konstruktivisme lebih berfokuskan kepada membuat perhubungan antara fakta-fakta dan menggalakkan kefahaman baru melalui proses asimilasi dan akomodasi (Nor Jannah Hassan, et al, 2015).

Persekitaran pembelajaran konstruktivisme berasaskan teknologi menuntut pelajar terlibat dan interaksi dengan bermakna. Penekanan ini merujuk kepada pelajar yang mentafsir dan membina pengetahuan bermakna melalui interaksi dan pengalaman sedia ada pada diri pelajar. Dengan itu, sekiranya pendidik menggunakan pendekatan konstruktivisme, cabaranannya adalah dengan menyesuaikan dan modifikasi terhadap strategi reka bentuk pengajaran supaya pelajar secara aktif terlibat dalam aktiviti dan tugasan projek yang bererti dimana menggalakkan pelajar untuk meneroka, menguji, membinaan, berkolaborasi, dan membuat refleksi dari apa yang sedang dipelajari.

Menurut Wilson (1996) persekitaran pembelajaran konstruktivisme merupakan ruang pelajar bekerjasama dan menyokong antara satu sama lain. Tambahan pula kerjasama ini menggunakan pelbagai sumber dan alat untuk mencapai matlamat pembelajaran dan penyelesaian masalah. Konsep ini memberi tumpuan terhadap persekitaran pembelajaran berbanding persekitaran pengajaran. Ini bertujuan untuk mengemukakan kelunturan terhadap aktiviti-aktiviti yang autentik dan bermakna bagi pembinaan kefahaman dan pengembangan berkaitan kemahiran penyelesaian masalah yang menggalakan kemahiran berfikir kritis.

Konsep konstruktivisme ini juga menekankan pembelajaran aktif, pelajar memainkan peranan penting sebagai pengantara dan pengolahan pembelajaran (Jonassen, 1999). Pembelajaran berpusatkan pelajar perlu diberi penekanan dimana menggalakkan pembelajaran ialah hak diri pelajar. Greening (1998) mencadangkan, hak diri pelajar untuk belajar berlaku apabila pembelajaran aktif dan pelajar merasai pembinaan ilmu pengetahuan berlaku secara semulajadi. Pendekatan persekitaran pembelajaran konstruktivisme (Jonassen, 1999) percaya bahawa pelajar perlu didedahkan dengan masalah yang menarik, relevan, dan bermakna untuk diselesaikan. Masalah yang ditimbulkan tidak semestinya meliputi masalah dunia sebenar adalah memadai dengan hanya struktur masalah dan membolehkan pelajar mencari penyelesaian terhadap masalah tersebut. Namun tiada satu penyelesaian atau jawapan yang betul untuk satu masalah menggunakan pendekan tersebut.

Persekitaran pembelajaran konstruktivisme direka bentuk untuk melibatkan pelajar dalam memupuk kemahiran berfikir yang kompleks yang memerlukan penyasiatan dan maklum balas yang munasabah terhadap masalah yang ditimbulkan. Pelajar perlu membina idea mereka sendiri untuk mencari penyelesaian bermakna bagi mengatasi sesuatu situasi. Suchman (1987) merujuk hal ini sebagai pengetahuan yang dibina dan difahami oleh pelajar. Pencarian yang efektif di Internet adalah cara praktikal untuk mengakses sumber dan membangun pembelajaran sebelumnya. Greening (1998) menyarankan, harus ada tujuan disebalik aktiviti diperingkat awal sehingga pengalaman memberikan nilai terhadap diri pelajar.

Perubahan pendekatan dalam proses PdP bertunjang kearah inovasi yang menjadi pemangkin dalam mewujudkan persekitaran sosial pembelajaran antara guru dengan pelajar atau pelajar dengan pelajar yang lain. Ilmu pengetahuan dibina bersama dengan penglibatan orang lain. Dalam situasi ini, pelajar didedahkan kepada peluang untuk menilai maklumat dan ilmu pengetahuan kearah pemahaman yang kukuh. Justeru, pendekatan kontruktivisme sosial membantu pelajar kearah perkembangan pemikiran pelajar yang lebih kritis. Dengan cara ini, pelajar berkesempatan mengujudkan konteks sosial, belajar kemahiran pemprosesan maklumat untuk menguasai sesuatu ilmu pengetahuan yang dipelajari didalam situasi bilik darjah malah diluar bilik darjah.

Persekitaran pembelajaran konstruktivisme sosial memberi penekanan terhadap pembelajaran berpusatkan pelajar dan menerapkan kerjasama dalam pembelajaran dalam

menerusi pelbagai media digital seperti teks, audio, video dan sebagainya yang menggalakkan kesedaran mengenai proses pembinaan pengetahuan (Shaharudin Md Salleh, 2012). Malah keupayaan untuk membina kemahiran berfikir kritis melalui diskusi antara guru dengan pelajar atau pelajar dengan pelajar dalam persekitaran yang dibina.

Kebanyakan aktiviti dalam permainan digital masa kini disesuaikan dari aspek sosial dan budaya (Gee, 2003), berkumpulan, bermasyarakat, dan identiti (Wenger, 1998). Malahan menjadi kegemaran generasi sekarang bermain permainan digital berbentuk pesaing dan secara berkumpulan berbanding permainan digital yang hanya semata-mata menguji kecerdasan (Prensky, 2001). Bermain permainan digital secara berpasukan melalui dalam talian memberi ruang kepada mereka membincangkan tentang cabaran, melengkapkan matlamat permainan dan menyelesaikan cabaran-cabaran yang terdapat dalam permainan digital. Selain itu, hampir setiap permainan digital yang dibangunkan tidak hanya sebagai satu permainan, tetapi ianya wujud secara logik sebagai sistem permainan (Prensky, 2006). Dalam sistem ini, selain permainan digital yang kompleks juga digabungkan dengan ruang chat dalam masa nyata, forum dalam talian, ruang rakan permainan digital, blog, dan lain-lain. Semua komponen ini membolehkan dan menggalakkan individu untuk berkongsi, berbincang, menilai dan menggunakan pengetahuan dalam permainan digital yang dikongsi bersama dan dibina oleh ahli komuniti.

Dalam pendekatan didaktik persekolahan, pembelajaran berlaku melalui pengajaran dan ujian (Gee, 2005), dan pelajar hanya boleh mendapat pengalaman pembelajaran yang seragam (Halverson, 2005). Berbanding dengan pendekatan tradisional, pembelajaran berasaskan permainan boleh menjadi persekitaran sosial dan budaya yang membantu individu belajar dengan mengintegrasikan pemikiran dan interaksi sosial (Shafferet al., 2005). Selain itu, proses pembelajaran keseluruhan tidak semestinya perlu muka-ke-muka dan mengambil tempat di sekolah.

Yang (2012) dalam kajiannya bahawa permainan digital sering menekankan pembelajaran kolaboratif serta aktif dan reka bentuk sebahagian besarnya adalah berdasarkan prinsip konstruktivisme sosial yang memupuk pemikiran kritis. Oleh itu, dalam memenuhi keperluan sumber tenaga manusia di abad ke-21 individu-individu yang mampu berkerja secara berpasukan melalui komunikasi yang efesian, perkongsian idea-idea baru untuk memperolehi matlamat dan misi dalam kumpulan.

Teori konstruktivisme sosial amat berperanan dalam pembelajaran berasaskan permainan digital dan membantu dalam konteks perkembangan kognitif dan interaksi sosial dalam suasana yang selamat. Boleh disimpulkan, nilai dalam permainan membawa kepada perkembangan pemikiran kritis. Oleh yang demikian bagi memudahkan pembinaan pengetahuan dan kefahaman terhadap maklumat baru yang diterima semasa sesi pengajaran, perlunya persekitaran pembelajaran yang merangsang pelajar berdasarkan pendekatan pembelajaran yang aktif, situasi pembelajaran sebenar dan memanipulasi terhadap bahan dalam usaha membina makna terhadap konsep yang diajar yang berkesan.

Kesimpulan

Antara kekangan dan kekurangan yang dikenal pasti bidang pendidikan hari ini ialah pendidik cuba untuk mendidik generasi baru dengan cara lama. Disampig itu, proses PdP di dalam kelas hanya menyalurkan pengetahuan seberapa banyak yang boleh dan menitikberatkan isi kandungan kepada pelajar tetapi kurang penekanan terhadap penguasaan terhadap kemahiran berfikir kritis. Permainan digital mempunyai potensi dalam pembelajaran kemahiraan abad ke 21 sebagai satu strategi yang membuatkan pembelajaran menyeronokkan dan mengekalkan fokus pelajar dalam

kelas. Sungguhpun konsep integrasi permainan digital dalam pembelajaran kelihatan menarik, pelaksanaan idea ini adalah mencabar. Konsep konstruktivisme menekankan pembelajaran aktif, pelajar memainkan peranan penting sebagai pengantara dan pengolahan pembelajaran.

Tetapi timbul permasalahan yang merisaukan ibu bapa dan masyarakat, pelajar yang gemar bermain permainan digital berdepan dengan masalah kurang kemahiran bersosial dan berkomunikasi. Malah sukar untuk menyesuaikan diri dengan persekitaran. Oleh itu, untuk menangani kerisauan dan permasalahan ini perlunya sesuatu dilakukan dengan memasukkan ciri-ciri yang membantu pelajar membina pengetahuan secara aktif, melibatkan aktiviti kerjasama, berkolaborasi, bekerja dalam kumpulan dan pembelajaran berdasarkan kepada persekitaran pembelajaran sosial konstruktivisme diperkenalkan.

Perubahan pendekatan dalam proses PdP yang berinovasi yang menjadi pemangkin dalam mewujudkan persekitaran sosial pembelajaran antara guru dengan pelajar atau pelajar dengan pelajar yang lain. Ilmu diperolehi melalui perkongsian dengan orang lain. Malah pembelajaran berasaskan permainan boleh menjadi persekitaran sosial dan budaya yang membantu individu belajar dengan mengintegrasikan pemikiran dan interaksi sosial.

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