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## **Factors that Influenced Libyan Teachers' Decisions in Selecting Materials for EFL Reading Classroom**

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### **Abstract**

Instructional materials have always been one of the key factors in enhancing teaching and learning. Hence, teachers assume the responsibilities in selecting effective materials to be used in the classroom. In order to decide instructional materials for the learners, teachers need to have the knowledge and understanding of selection criteria that will guide their decisions. This paper presents the factors that underlie Libyan EFL teachers' decisions in selecting materials for reading lessons. The participants of this study are three Libyan English language teachers teaching in Libyan international schools in Malaysia. Lesson plans on the teaching of reading comprehension were referred to and interviews were conducted with the respective teachers to understand their decisions regarding materials used to teach reading comprehension. The findings showed that there are seven main factors that affect the participants' choice of reading materials which are learners' background, proficiency level, interest in reading, skill development, authenticity, level of difficulty and appealing content. This article provides a better understanding on the EFL teachers' justifications of the materials selected in ensuring effective EFL reading lessons.

**Keywords:** instructional materials, reading comprehension, materials selection, EFL



## 1. Introduction

English language teaching (ELT) has been rapidly changing in align to modernisation and globalisation. Language educators are experiencing the era whereby learning the language at present is different from the way they themselves were learning in the past (Tomlinson & Masuhara, 2018). Teachers are required to be constantly updated with the transition in teaching and learning in order to ensure that they are able to deliver effective lessons.

One of the areas in teaching and learning that has to be aligned with the demands of the 21<sup>st</sup> century teaching and learning is the use of instructional materials. Instructional materials play a crucial role in the teaching and learning of the English language (Capan, 2014). According to Cakir (2015), teaching materials can be defined as any tools that teachers use to assist their students in adequately learning the target language. They are also used as means to increase students' access to the language. Teaching instruments also include every instrument that contributes greatly to students' progress; anything which is used by teachers and learners to facilitate learning (Littlejohn, 2012; McDonough, Shaw & Masuhara, 2013; Tomlinson & Masuhara, 2018).

Instructional materials for language teaching and learning have been developed and adapted continuously to address the growing challenges of learning English as a second or foreign language (Tomlinson & Masuhara, 2018). With the various selections of instructional materials being produced, teachers play a critical role in deciding the types of materials to be used or adapted in support of the teaching and learning process. Clearly, English language teachers need to equip themselves with the knowledge and skills in selecting and adapting materials appropriate for their teaching and learning contexts (Capan, 2014; Tomlinson & Masuhara, 2018).

Selecting instructional materials is one of the issues that English language teachers faced due to several reasons. Some teachers may not be able to identify the learning difficulties of their students and thus may not choose the right materials to address their students' learning needs (Incecay, 2011; Capan, 2014). In addition, teachers may also face problems to match the appropriate materials with the specific needs of the students or their different levels of proficiency (Incecay, 2011; Capan, 2014; Tomlinson & Masuhara, 2018). Some teachers may also find it challenging to gain the right materials due to the lack of resources available (Howard & Major, 2004; Barahona, 2014; Abdul Hadi & Intan Safinas 2017; Tomlinson & Masuhara, 2018).

In reading classes, choosing appropriate reading materials is very crucial. Studies have highlighted that teachers have encountered challenges in selecting good reading materials (Arias, 2007; Abdul Hadi and Intan Safinas 2017). Arias (2007) described deciding suitable reading materials is a meticulous process in an EFL reading class. Abdul Hadi and Intan Safinas (2017) also claimed that the aspects of good reading lessons revolve around the potential and application of relevant instructional materials and teachers' teaching skills. This is because instructional resources facilitate the understanding of difficult concepts as well as the teaching and learning of the reading skills (Omuna, Onchera & Kimutai, 2016).

In EFL reading classroom, failure to provide effective instructional materials may obstruct learners' understanding. Omuna, Onchera and Kimutai (2016) debated that this issue may give an impact on teaching and learning of English reading skills. Teachers, who do not use effective teaching materials to engage their students in the learning process, are setting their students up for failure and disrupting the entire learning process (Leland, 2013).



## 2. Literature Review

Piaget's Cognitive Theory is one of the theories that focused on development and learning. According to Cognitive theory, all children go through the same order of development, but they do so at different rates. He further explained that an important implication of this theory is adaptation of instruction to the learner's developmental level. The content of instruction needs to be consistent with the developmental level of the learner. In the context of instructional materials, the teachers need to take into consideration the learners' cognitive development in choosing the appropriate materials. The teachers need to provide a variety of materials and they have to match the learners' cognitive ability to promote understanding of the content of the materials presented (Tomlinson, 2011; Tomlinson & Masuhara, 2018).

In addition, Aloqaili (2012) emphasised that reading materials used in class must be able to tap on learners' schemata to ensure understanding and meaningful input of the materials. The teachers need to carefully choose materials that are related to learners' background and teachers need to make connections of the content of the materials with the learners' schemata. On the other hand, Liu et al. (2010) argued that some reading materials might relate to learners' schemata but they were not able to comprehend the texts due to their proficiency level. Hence, apart from ensuring that instructional materials relate to learners' background knowledge, learners' proficiency level is also one of the local contexts that need to be considered when choosing learning materials (Intan Safinas et al., 2012). Studies have shown that in the context of language acquisition, proficiency level is a critical element to be considered in selecting appropriate reading materials (Howard and Major, 2004, Intan Safinas et al., 2012; Tomlinson, 2011). Tomlinson (2011) argued that teachers need to adapt materials that they find inappropriate for the learners' language ability before using them. These materials can be simplified, some parts can be deleted or the length can be reduced.

Selecting reading materials also should revolve around learners' interest (Howard and Major, 2004; Tomlinson, 2011; Tomlinson & Masuhara, 2018). Fluency is a result of building reading proficiency through lots of interesting reading materials (Beglar, Hunt & Kite, 2011). As proposed by Tomlinson (2011), reading materials should be of a variety of comprehensible and compelling items such as comic books, graphic novels, magazines, newspaper articles and short stories that engage the learners.

Arias (2007) highlighted a set of criteria that EFL teachers should consider in selecting reading materials. She divided the criteria into two core factors. The core factors revolve around two significant elements in the process of selecting reading materials. The first aspect is associated with the learners. It refers to learners' proficiency, schemata, interest and learning needs. Another aspect focuses on the instructional materials. The factors that relate to instructional materials are the subject matter, relevance and authenticity.

Similar views were expressed by a considerable number of researchers who emphasised on several converging principles underlying materials development and selection in the context of English language teaching (Howard & Major, 2004; Harsono, 2007; Hardika, 2012; Tevdoska, 2015; Tomlinson & Masuhara, 2018). Some of the converging principles are: (1) materials should be contextualised; (2) materials should achieve impact; (3) materials should help learners to feel at ease; (4) materials should help learners to develop confidence; (5) materials should encourage learners to develop learning skills and strategies; and (6) materials should expose the learners to language in authentic use (Howard & Major, 2004; Harsono, 2007; Hardika, 2012; Tevdoska, 2015; Tomlinson & Masuhara, 2018).



One of the most highlighted principles in materials selection is instructional materials need to be contextualised to the target learners' background, experiences and level of proficiency. The topics selected should be relevant and appropriate to the learners in order to ensure learners develop interest and they become engaged with the lesson (Howard & Major, 2004; Harsono, 2007; Hardika, 2012; Tevdoska, 2015; Tomlinson and Masuhara, 2018).

Apart from that, personal engagement and motivation can be gained through materials that achieve impact such as the presentation of novel illustrations and content (Hardika, 2012; Tevdoska, 2015; Tomlinson and Masuhara, 2018). Novelty can be achieved using unique and appealing stories and local references. Various types of texts from different sources to address diverse learners may also attract learners to read.

Materials should also be flexible in terms of content. They should offer a wide range of possibilities from which students can choose which among them are most suitable and make them feel at ease. Materials can also help learners to feel at ease when they consist of illustrations rather than just texts and the texts presented are those related to their own cultures that include examples (Harsono, 2007, Tomlinson & Masuhara, 2018).

Another principle is that materials should help learners to develop confidence. When students are at ease, they can develop their confidence in producing the answers and giving their opinions during the teaching and learning process (Hardika, 2012). Learners who are given texts that are slightly above their ability would also experience development in their confidence when they are able to use their language skills and reading strategies in understanding the texts (Howard and Major, 2004; Tomlinson & Masuhara, 2018). Tomlinson (2011) argued against simplifying texts to the learners' level of proficiency. Instead, he proposed that materials used need to get learners to stretch beyond their level of proficiency through exposing them to accompanied tasks that are stimulating and challenging but achievable. This will get the learners to feel successful and further build their confidence.

Besides that, materials should facilitate learners' utilisation of learning skills and reading strategies. Materials enable the learners to be interested in them, which can draw their attention and encourage them to assess their own learning and language development (Howard & Major, 2004; Harsono, 2007). Jackson (2011) reported on the benefits of learning exercises that require the learners to make decisions and explore their own learning styles and strategies.

Another highlighted principle is that materials should expose the learners to language in authentic use. Localising materials has the benefits of familiarity and connects them to the learners' world while also matching local practice and curriculum (Howard and Major, 2004; Tomlinson, 2011; Garton & Graves, 2014). A lot of teaching and learning materials can provide exposure to authentic input through the instructions, the advice they give for the activities and the spoken and the written texts included in the materials (Howard & Major, 2004; Harsono, 2007; Tomlinson, 2011). Authentic language usage will help the students to learn the target language better as they use it in real-life situations. In other words, the information ought to vary in style, mode, medium and reason and ought to be rich in components which are normal for usage in the target language such as stories, songs, speeches, newspaper articles and others.

Past literature has evidently highlighted that selecting materials for teaching English is an action that requires several considerations involving guidelines and principles that relate to language acquisition. Local context is one of the strongest influencing factors in selecting materials and for the teaching of reading, the development of reading skills as well as the



presentation and relevance of the materials are among the most significant factors.

### **3. Data Collection Methods**

This research was conducted using a qualitative approach, and its objective was to highlight the factors that influenced the selection of instructional materials to teach reading. Three teachers from three Libyan International Schools in Kuala Lumpur participated in the research. These teachers are qualified EFL teachers and have been teaching for more than five years. In addition, these teachers also have considerable experience in teaching EFL reading skills for all levels – low, intermediate and advance.

The data were collected from semi-structured interviews with the three teachers. Interviews were conducted to get insights on the teachers' beliefs and underlying principles in selecting materials to teach reading. After the lessons were carried out, the participants were interviewed again with regards to their lessons and the materials used. The interviews were done to investigate the factors that affected their choices of materials in the EFL classroom.

Interviews have been highlighted as one of the best approaches in exploring participants' justifications and understandings of a particular context (Edwards & Holland, 2013). Interviews offered insights into the meanings conceptualised by individuals and groups which were attached to their experiences, social processes, practices and events (Edwards & Holland, 2013; Jamshed, 2014).

The transcripts were analysed using thematic analysis. Themes related to the criteria in selecting materials to teach reading were identified and coded for further analysis.

### **4. Findings and Discussion**

The findings indicated that all of the participants shared a set of underlying principles and understanding related to the selection of reading materials. These teachers highlighted seven factors that influenced their decisions in choosing the appropriate materials for teaching reading comprehension. The factors can be divided into two categories that are factors related to the students and factors related to the instructional materials. There are four main themes generated under factors related to students which are background knowledge, proficiency level, interests and skills development. For the latter, three themes identified are authenticity, level of difficulty and appealing content.

#### **4.1 Background knowledge**

Arias (2007) and Aloqaili (2012) asserted that prior knowledge has a crucial impact on learners' ability to comprehend a text. Both researchers argued that for reading texts to be meaningful and effective, they have to tap on learners' schemata. Based on the findings, all of the participants mentioned that learners' background knowledge play a huge role in their decisions of the reading texts to be utilised. For instance, Participant 1 chose texts on topics such as chocolate and crossing the wadi. While participant 2 and 3 chose texts on hair with regards to Islamic beliefs, dilemmas and Arab culture. The participants also justified that they chose the texts based on their understanding that their learners were able to relate to the texts



using their existing knowledge. They also highlighted that when the students were able to relate to the texts, the reading became meaningful and beneficial.

“ ... it must tackle students’ background knowledge of the topic. It must be able to attract students’ attention and interest” (P2, IN2)

“They can understand better as the materials used are closely related to their life. They are also easy to carry out. They make the reading lesson be more meaningful and beneficial” (P3, IN1)

#### 4.2 Proficiency Level

Most studies on instructional materials in language acquisition highlighted learners’ proficiency as one of the key factors in choosing effective materials (Howard & Major, 2004; Arias, 2007; Tomlinson, 2011; Aloqaili, 2012; Intan Safinas et al., 2012; Garton & Graves, 2014; Tomlinson & Masuhara, 2018). Reading materials need to meet learners’ language ability for the materials to be comprehensible to the learners.

Based on the interviews, the participants were given classes with multiple proficiency level learners in a classroom. All of the participants collectively emphasised that they selected reading materials to cater to the diverse proficiency level learners. Hence, the materials they selected were of intermediate level of difficulty to ensure that all of the learners were able to comprehend the texts. However, the participants emphasised that although they chose average difficulty texts, they gave achievable tasks for the learners to do.

“Each student has their own proficiency and interest. There is a mixture of good, average and weak students in my classroom. So, it’s hard for me to you know, help them with weaknesses and strengths in reading individually. I usually prepare materials that are in average difficulty so that it can cater to all levels of students” (P1, IN2)

“I can’t choose materials that cater to individual learning objectives. I believe that my students have different reading proficiency. I usually make sure that the materials I use suit average level of difficulty. So, you know all of them can do it. It might still be challenging, but at least they can do it” (P2, IN 2)

#### 4.3 Learners’ Interest

Learners’ interest has been highlighted as a crucial factor in providing meaningful input and promoting reading comprehension (Beglar, Hunt & Kite, 2011; Tomlinson, 2011). The participants agreed that taking time to know students’ interest and providing reading materials that cater to it worked as a leverage that helped in reading comprehension. They also believed that to maintain students’ attention, reading materials should be perceived as meaningful and purposeful to the learners.

“Reading is not something that students usually consider as a hobby. Most of them even despise reading. I had a student of mine who literally rolls his eyes whenever we start the reading lesson. So, I try my best to include something that is easy and fun to them” (P1, IN 2)



“From the first week of the session, I try to get to know them. Get to know what their interest are. I’ll make a point of you know choosing the topics they like in turns” (P2, IN 2)

“Reading is not an easy task. They don’t really fancy reading. The students I mean. By using interesting and meaningful materials, they can see the purpose of reading and see it as an active process instead of a meaningless one” (P3, IN 2)

#### **4.4 Skills development**

In the teaching of reading comprehension, it is important that learners are exposed to materials that promote development of language skills (Howard & Major, 2004). Language teachers need to be able to get learners to use their reading skills and promote development of the skills.

Participants 1 and 2 claimed in their interviews that it was significant to be able to use reading materials that did not only provide students with new skills but also developed the present skills. They mentioned that a good reading material should be able to build and enhance their skills.

“From a perspective of an English teacher, a good reading material must be meaningful. It must be purposeful and beneficial for students’ reading skills. It is also supposed to be able to you know, connect the dots” (P1. IN 1)

“In simple words, it’s not too difficult, but it’s good enough to make them apply what they have learned previously and also learn new skills. It’s no too much for them to absorb” P2, IN 1)

“I want my students to improve. All teachers want that. But I believe in gradual improvement. I walk my students through gradual improvement. For instance, if today’s topic is about life cycle of an animal and they manage to achieve the learning objectives, tomorrow’s lesson can be moved to a slightly difficult text like extinction” (P3, IN 1)

The four factors related to the target learners clearly echoed the principles in materials selection and development asserted by many researchers in the field (Howard and Major, 2004; Tomlinson, 2011). Another three factors highlighted by all the participants discussed about the characteristics of the materials are authenticity, level of difficulty and appealing content.

#### **4.5 Authenticity**

Interestingly, all of the participants emphasised on how authentic reading materials encouraged the learners to apply the reading skills acquired in class to their real life experience. They justified the relationship between authentic materials and its close connection to learners’ personal experience made these materials served a purpose and became relevant in the reading class.



“I use a lot of materials that are relatable to them. And they must also be authentic. So, it can gauge their understanding better when they can see it in their daily life. I also make sure that the materials include the language skills so that they can see the relationship among all those skills. It can open their eyes on the relevance of the materials” (P2, IN 1)

“They can understand better as the materials used are closely related to their life. They are also easy to carry out. They make reading lesson be more meaningful and beneficial” (P3, IN 1)

#### **4.6 Level of difficulty**

From the interviews conducted, the level of difficulty of texts was highlighted as one of the factors that underlay the participants’ decision in choosing reading texts. Interestingly, all of the participants mentioned the connection between the level of difficulty of the reading materials and the development of the learners’ reading ability. According to them, utilising materials that challenged learners could motivate the learners to improve their reading skills.

“We need to prepare a lesson that students are ready to learn if their learning experience is to be effective. For example, the level of difficulty of the reading text. I always ask myself, “Are they ready to move to the next level?” or “Can they cope with this kind of text already?”, before I select the materials” (P1, IN 2)

“I focus more on their abilities. I like to challenge my students once I know they can manage the present reading task. I usually bring in materials that are slightly difficult than what they had previously” (P3, IN 2)

#### **4.7 Appealing content**

Engaging materials is one of the characteristics of the materials that the participants consistently highlight during the interview. Tomlinson (2011) highlighted that teachers need to achieve impact through the instructional materials selected by choosing texts with appealing content from various sources. The participants clearly stated in the interviews that they chose topics that appeal to their learners.

“I usually prepare materials that are in average difficulty so that it can cater to all levels of students, and it also must be interesting. To tackle a huge number of students, we need to make sure that the topics and the activities are attractive enough to get them going throughout the lesson” (P1, IN 2)

“In my opinion, it must tackle students’ background knowledge of the topic. It must be able to attract students’ attention and interest. If they are not interested in the topic, the lesson will not be effective as I hope it would be” (P2, IN 2)



## 5. Conclusion

This qualitative study explored the factors that underlay the decisions made by the Libyan English language teachers regarding the instructional materials used in their reading classes. The findings of this study supported past findings in the selection of EFL reading materials whereby materials were selected based on a set of particular criteria (Howard & Major, 2004; Arias, 2007; Tomlinson, 2011; Tomlinson & Masuhara, 2018). The participants' retrospective feedback have indicated that they have formed a set of imprinted principles that guided their decisions (Abdul Hadi & Intan Safinas, 2017).

The findings have shown that the participants made decisions based on two main elements which are learners and materials. Four factors related to learners that influenced their decisions are background knowledge, proficiency level, interests and skills development, while three factors are connected to materials which are authenticity, difficulty level and appealing content. Clearly, the local contexts dominantly influenced the teachers' decisions as reported in many studies on materials selection in English language teaching (Howard & Major, 2004; Arias, 2007; Tomlinson, 2011). The participants also highlighted the strong association between interest and motivation and how it has a huge impact on promoting reading skills among learners with multiple learning ability.

This study provided evidence that teachers' knowledge, beliefs, assumptions and experience informed their instructional decisions and selection of materials. In the context of the Libyan EFL teachers, their retrospective comments showed their shared conceptions of the selection criteria. Their decisions were also heavily influenced by the learners' characteristics and attitude towards the language and their motivation to read. Evidently, the teachers conceptualised their selections of reading materials based on their principles, beliefs and understanding that are parallel to the guidelines and principles in language teaching materials selection.

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## Determinants of Savings in Malaysia

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### Abstract

This study evaluates the responses of economic determinants towards savings in Malaysia. This study uses four determinants of savings which are inflation, economic growth, age dependency ratio and money supply for the period of 31 years from 1986 to 2016. This study focuses only on Malaysia as the subject. All data were collected from the World Bank and Bank Negara Malaysia. Unit root test such as ADF and PP were used to determine the stationarity of data. Ordinary Least Square estimator of regression was applied to analyse the model. From the findings, it is discovered that inflation and economic growth give positive and significant impact on savings, while age dependency ratio and money supply has a negative and insignificant relationship towards savings.

**Keywords:** Savings, Inflation, Economic Growth, Age Dependency Ratio, Money Supply.

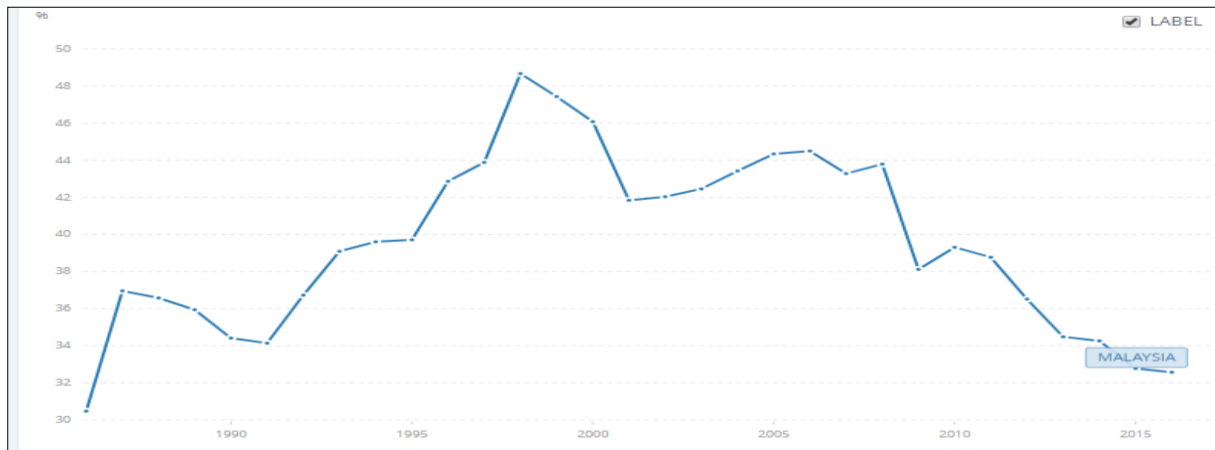
### 1. Introduction

Savings can be defined as an extra income after all of the consumptions are subtracted from the amount of disposable income by a consumer or household. Gross domestic savings are the total savings in a country received from the household, private and public savings (Khan, Khan & Jadoon, 2017). Saving is an important element for capital formation which eventually stimulates economic growth. Harrod (1939) and Domar (1946) modelled the role of savings as a significant factor for generating the country's growth which claimed that the high rate of savings would boost the rate of investment and speed the economy. Nevertheless, the economic growth in the long run would not be affected by a national saving due to the effects of diminishing returns to the scale and technological improvements that were added by Solow (1956) in his model.

In the developing countries, domestic savings play a vital element as it assists local entrepreneurs to adopt and use new technology for products innovation without having to use foreign investments (Aghion et al., 2009). The country is less dependent on foreign capital when the domestic savings are able to supplement its investment planning. This will increase the opportunities for local investors to invest in their own country. However, in some countries, foreign savings have to be complemented with a domestic investment. This is in contrast to the developed countries which have the potential in developing their own technologies.



Figure 1 shows the rate of gross domestic savings in Malaysia from the years 1986 to 2016. The rate of gross domestic savings fluctuated over the years and this was a serious issue as it could affect Malaysia's economy. In 1998, it can be clearly seen that after reaching a peak of 48.7%, savings declined rapidly from 47.4% in 1999 to 32.5% in 2017.



**Figure 1: The Gross Domestic Savings in Malaysia (% of GDP)**  
 Source: World Bank (2018)

The downturn in the gross domestic savings-to-GDP in 1999 and 2008 were due to the Asian and global financial crisis respectively which in turn affected the aggregate demand, money market and gross domestic products. Since the national savings has risen quite slowly, it is important to study specific factors that could enhance savings in Malaysia.

This research was conducted in order to examine the factors that could affect the savings in Malaysia. There were many studies that have been carried out on the determinants of domestic savings in different countries such as the study in G7 countries (Hüfner and Koske, 2010), sub-Saharan countries (Keho, 2012), Australia (Price & Finlay, 2014), Poland (Kolasa & Liberda, 2014), Tanzania (Epaphra, 2015), Kenya (Marcel & Kirori, 2016), Japan, Turkey, Pakistan, Russia, Singapore and China (Khan, Khan & Jadoon, 2017). and West African countries (Abasimi & Martin, 2018).

Previous researchers used different variables, such as the government budget, rate of return on deposit, young and old populations, rural and urban populations, financial depth, precautionary saving, expectations on income and debt, as the factors for domestic savings. In addition, there were also studies related to the Malaysian context such as Tang (2010), Khan and Abdullah (2010), Mansur, Mamalakis, and Idris (2011), Keat, Mun, Yuan, Hei and Hin (2015), and Hashim, Pin and Isa (2017). As the variables applied were quite different, this study examined some important variables which were believed to exert an effect on the country's savings. The independent variables used for this study were inflation rate, economic growth, age dependency ratio and money supply. Ordinary Least Square (OLS) estimator of regression was applied to analyse the model.

Our paper proceeds as follows: in section 2, we present literature survey, while section 3 discusses the data and analysis, and section 4 reports the findings. Finally, section 5 presents the conclusions and recommendations of the study.



## 2. Literature Review

In economy, saving plays an important role in a country's growth and development through the investment process. Many empirical studies have been conducted to examine the determinants of savings and their roles in improving a country's economy. A study in G7 countries including Germany, Canada, France, United Kingdom, United States, Japan and Italy conducted by Hüfner and Koske (2010) found that the savings rate in the developed countries was determined by factors such as disposable income, inflation and real interest rate. The same study conducted in Australia by Price and Finlay (2014) showed that savings rate depended on precautionary savings, income expectations and attitude to debt. However, in Poland, Kolasa and Liberda (2014) found that the interest rate, income, corporate savings and government savings affected the savings trend.

Khan, Khan and Jadoon (2017) used some variables such as age dependency ratio, gross domestic product, money supply growth, per capita income, foreign direct investment and inflation as determinants for domestic savings. The study was conducted in 6 countries – Japan, Turkey, Pakistan, Russia, Singapore and China – from the years 1995 to 2016. From the findings, gross domestic product, money supply and per capita income gave positive effects on domestic savings, while age dependency ratio, foreign direct investment and inflation showed negative effects.

In the African countries, there was a study conducted by Mualley (2011) which used interest rate, age dependency ratio and per capita income to examine savings. He found that the only factor that affected savings was income per capita. However, the study in the West African countries from 1997 to 2016 by Abasimi and Martin (2018) stated that income, real interest rate and gross domestic products had positive impacts on savings, whilst age dependency ratio gave a negative effect. It was in line with the studies by Abasimi and Martin (2018) in four West African countries, namely, Ghana, Togo, Burkina Faso and Cote d'Ivoire by Keho (2012) in the sub-Saharan countries. In terms of inflation and savings, it was revealed by Epaphra (2015) that inflation had a negative impact on savings. These findings were supported by a research done by Marcel and Kirori (2016) in Kenya from 1993 to 2013. In terms of economic growth, savings in Tanzania were proven to directly impacted the country (Epaphra, 2015). It was similar to the studies done by Beshir (2016) and Girma (2017) who found that the economic growth was an important determinant for domestic savings in Ethiopia from 1980 to 2014.

Savings could be affected by the level of young population as noted by Aric (2015) who conducted the study in thirteen Middle East countries from the years 2000 to 2013. In the study, income, money supply, government expenditure and inflation were included as the factors. The result stated that inflation and savings were positively related, while the relation between money supply and savings were negatively related. This was due to the increase in consumption when there was an expansion of money supply. This was in line with the research done by Narayan (2005) who concluded similar findings in the case of Oman.

In the Southeast Asia countries, Faruquee and Husain (1998) found that demographic changes and income per capita were the essential factors that could determine savings pattern. However, income, dependency rate and foreign savings rate were the factors that determined savings in the South Asia countries such as India, Bangladesh, Sri Lanka and Nepal (Sahoo & Dash, 2007). In Bangladesh, the study conducted by Hammad, Khan, and Abdullah (2010) used export, interest rate, inflation and gross domestic income from the years 1983 to 2013 as the determinants. Based on their results, income and gross domestic savings had a positive



relationship. This was similar to the study by Jilani, Sheikh, Cheema, and Shaik (2017) in Pakistan. They also found that age dependency ratio affected savings positively. However, Salman and Zaib (2012) found that age dependency ratio had an inverse correlation to savings. However, another study has proven that the relationship between money supply and savings was positive (Ahmad and Mahmood (2013)).

In the case of Malaysia, there were few studies in regards to savings conducted from 2010 to 2017. Khan and Abdullah (2010) examined the determinants of savings in Malaysia using error correction model (ECM) approach, and Johansen and Juselius cointegration approach to determine the long-run relationship between per capita income, young age dependency rate, rate of return on deposit, inflation rate, government fiscal balance and old age dependency rate. From the study, they found the link between young age dependency rate, government fiscal balance and per capita income with private savings in the short-run. A study conducted by Keat, Mun, Yuan, Hei and Hin (2015) used factors such as inflation rate, government budget and gross domestic product per capita as the determinants of savings. They found only one factor which gave a significant effect on savings – the inflation rate. Hashim, Pin and Isa (2017) chose consumer price index, interest rate and gross national income as the factors which affected savings in Malaysia. They found that consumer price index and interest rate had an impact on savings rate in Malaysia.

Thus, despite extensive literature analysing the relationship between savings and macroeconomic factors, the results varied from one country to another due to the economic, social and demographic factors. Therefore, we present some important variables which may help the authorities in formulating strategies to achieve economic goals.

### 3. Method

This study used annual data of inflation rate, economic growth, age dependency ratio and money supply (M2) in Malaysia covering the period of 1986 - 2016. The choice of the period was governed by the availability of data. The data were taken from the World Bank and Bank Negara Malaysia. Regarding the estimation method, we first tested the stationarity of data collected and proceeded with the OLS approach as the preferred method. The model is expressed as below:

$$GDS = \beta_0 + \beta_1 INF + \beta_2 ECG + \beta_3 ADR + \beta_4 M2 + \varepsilon_i$$

While  $\beta_0$  is the regression coefficients,  $\beta_1, \beta_2, \beta_3, \beta_4$  are parameters for inflation, economic growth, age dependency ratio, money supply and  $\varepsilon_i$  is error term. The variables which are used in the above equation were derived from the different studies to see their impacts in the case of Malaysia.

### 4. Empirical Results

This study examined the determinants of savings in Malaysia namely inflation, economic growth, age dependency ratio and money supply for the period of 31 years from 1986 to 2016. The raw data were extracted from the World Bank and Bank Negara Malaysia. To test stationarity of the data, we employed both Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) procedures. Both tests used the model that allowed for a constant and deterministic trend. The results of these unit root tests are presented in Table 1. The results showed that each of the series are integrated at order one,  $I(1)$  except for ADR.



**Table 1: The result of unit root tests**

Variables		ADF	PP
<b>GDS</b>	Level	(0.0009)*	(0.0000)*
<b>INF</b>	Level	(0.0073)**	(0.0078)**
<b>ECG</b>	Level	(0.0011)*	(0.0011)*
<b>ADR</b>	Level	(0.8030)	(0.6849)
	d=1	(0.9307)	(0.9670)
	d=2	(0.0077)*	(0.0062)***
<b>M2</b>	Level	(0.0157)**	(0.0223)**

**Note:** The asterisks \*, \*\*, and \*\*\* denote the significance at 1 per cent, 5 per cent and 10 per cent levels; whereby, the value in percentages are probability.

The ADF shows that all the variables are stationary at level, but only ADR is stationary after second differencing, I(2). Most of the results are consistent with the PP test except for the case of ADR which achieved its significant level at 10 per cent. Therefore, we conclude that most of the estimated variables are integrated of order one, I(1).

For the OLS regression, the results are reported in Table 2.

**Table 2: The result of regression analysis**

Variable	Coefficient	Std. Error	t-statistics	p-value
<b>C</b>	-6.4094	2.9196	-2.1953	0.0381**
<b>INF</b>	1.8017	0.8149	2.2109	0.0368**
<b>ECG</b>	1.4907	0.2661	5.6028	0.0000*
<b>ADR</b>	-6.3004	5.4051	-1.1657	0.2552
<b>M2</b>	-0.0251	0.0548	-0.4585	0.6507
<b>R-squared</b>			0.6406	
<b>Adjusted R-squared</b>			0.6210	
<b>F-stat</b>			0.00004	
<b>P-value (F-stat)</b>			0.0000	

**Note:** The asterisks \* and \*\* denote the significance at 1 per cent and 5 per cent levels.

According to the results of analysis, R-squared is recorded at 64.06 per cent. It implies that inflation, economic growth, age dependency ratio and money supply explained about 64 per cent systematic variations on savings over the observed years in the Malaysian economy, while the remaining variation is explained by other determinant variables outside the model. For diagnostic check, the model was also tested for multicollinearity, autocorrelation, and heteroscedasticity. The value of Durbin Watson is 1.457720 for the model. This implies that there is a positive first order serial autocorrelation among the explanatory variables in the model. From the Variance Inflation Factor (VIF) values, the data has no multicollinearity because its value is less than 5. Then, to check whether there is any relationship between the error term and the independent variable for this purpose we applied White Test and it is clear that there is no any heteroscedasticity exist in the data.



The coefficients support our views that inflation would lead savings to increase and significant at 5 per cent level in the model. People would start to save money while their purchasing power is low and the value of money drops when the prices of goods and services become more expensive. Moreover, people care about the amount they hold in real terms, which then keep the money as a store of value. The evidence is supported by Ariç (2015) for the case of APEC countries.

Similarly, the economic growth positively affects domestic saving at 1 per cent significant level. The increase in economic growth suggests economy expansion and income increment, which led to the increase in savings as suggested by Keynes saving function. People with an excess income would always top up their volume of savings and carry out more transactions. This result is consistent with Johnson's (2015) study on savings in Nigeria. There was also the study conducted by Abdelmawla and Yousif (2016) who found that the economic growth could affect savings positively.

Apart from that, age dependency ratio indicates a negative relationship to the savings. The insignificant relationship between both variables has shown that the population who are not in labour force are highly dependent on the fixed income earners. Therefore, the higher the dependency ratio, the smaller the amount of savings in a country is. This result could be supported by Li (2006) who found that age dependency ratio had a negative and a statistically insignificant relationship with savings. Besides, the same result was also obtained from a research conducted by Abasimi and Martin (2018) in West Africa. However, Khan et al. (2017) found a negative and significant relationship between age dependency ratio and savings.

Likewise, money supply affects savings negatively and has an insignificant effect. An increment in the amount of money supply in the market adversely affects the savings as people tend to increase their investments rather than to save. The rise in money supply leads to lower interest rate, which in turn discourages people to save. This finding is contradicted to the result obtained by Onwuasoeze and Kirori (2016) for Kenya, who found a significant and an inverse relationship between both variables.

## 5. Conclusion

This study examined the linkages among savings, inflation, economic growth, age dependency ratio and money supply. The coefficients for inflation and economic growth were positively related to savings in Malaysia over the sample period of 1986 to 2016. Whilst, age dependency ratio and money supply were negatively related to savings.

This implies that inflation and economic growth are two important factors to boost people propensity to save in Malaysia. This empirical evidence may throw some light in which policymakers could use in order to increase the savings rate by managing the two macroeconomics variables – inflation and economic growth. Inflation could be a good indicator for savings as people need to save money now by reducing their consumption tendency and for future use. The positive association between savings and inflation implies that the consumers are rational and make decisions based on their perceptions when it comes to allocating the lifetime resources over the period of their lives. The increase in inflation encourage people to save.

In general, countries with higher economic growth enjoy higher standard of living. Efforts to improve the economic growth and development of the country could be rated as one important strategy to encourage domestic savings and investments. On the other hand, the increase in



age dependency ratio indicates that children do not contribute to savings, but would encourage parents to consume. Therefore, more children dependants would suggest a more intense attitude in making ends meet in order to make up for the high spending. This would limit and discourage them to save money in the later part of their lives.

The inverse relationship between money supply and savings explains the exact reality in this country. High money supply typically stimulate people's spending on goods through the benefit of lower level of lending rate. The government should take measures such as tight monetary policy to reduce money supply in the economy within manageable levels to keep interest rate at its higher level which would improve savings and maintain low inflation. This in turn would strengthen the financial market

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## **Influence of Social Media on Consumers' Food Choices**

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### **Abstract**

Social media is known as a social networking platform that allows all users either on application or website to share and create content. It can be a very convenient social platform for users to share and find information regarding food. With this social media application and the advanced digital environment, users' opportunity to share and search for food has widened. This study emphasises on identifying the relationship of audio and visual appearance, information sharing and delivery, and how peer pressure factor can influence food choices through social media. An online query form for obtaining all the dataset was distributed to students in UiTM Puncak Alam as our population. Data were analysed using Statistical Package for Social Science (SPSS) (V22) and results were obtained and described using descriptive statistics and Pearson Correlation test. In total, 350 data were obtained from the total number of population selected. This study shows that audio and visual appearance are the most influential factors in people's food choices.

**Keywords:** Audio visual appearance, information sharing, peer pressure, social media, food choices

### **1. Background of the Study**

To date, changes in Information and Communication Technology (ICT) are already evidenced through social media (Hearn, Collie, Lyle, Choi & Foth, 2014). Social media is basically a platform that connects people together no matter where they are. Even though people often relate social media with meeting new people, it is more about connecting friends and family, and meeting new acquaintances (Australian Communications Consumer Action Network, 2007). Thus, according to Giustini (2006), social media is also known as consumer-generated media.

Quinn Thomas (2015) stated that social media has not necessarily transformed the beliefs of people right away, but more to enable them to transform their beliefs slowly. Thus, numerous activities can be done easier than before and it will not be surprising that in the future, social



media will play a bigger role in affecting social behaviour in the society. Kaplan and Haenlein (2010) stated that engagement on social media has grown significantly among teenagers and adults aged between 20 to 45 years old. Rideout, Foehr and Roberts (2010) also reported that young adults spend almost 11 to 12 hours a day with technology and media. The availability of the Internet gives the opportunity for individuals to use social media without the need for physical meetings.

Food choices are the choices made by the consumers on the type of food that they are triggered to buy due to several factors. One of the obvious reasons is because of biological determinants such as hunger, appetite and taste. However, they also can be caused by economic determinants such as cost, income and availability. In terms of economy, choices mostly depend on the individual's income or socio-economic status. Low-income groups have been identified to have more imbalanced diet and low intake of fruits and vegetables (De Irala Estevez et al., 2000).

Social determinants such as culture, family, and peers also can be a factor. Social environment can influence the food choices of a person whether they realize it or not. Feunekes et al., (2003) stated that the way people influence others' food choices may not be limited to only one type and they are not necessarily aware that their food choices are influenced by the people around them. The attitudes, behaviour and knowledge about food can also contribute to the factors of the food choices.

There is a relationship between social media and food choices among the community (Zeitell-Bank & Tat, 2014). Social media has the ability to influence and give impact on people who use it either for good cause or vice versa. The relationship between social media and food choices is based on the way people use social media as a platform for information sharing or communication about food specifically. Most people around the world basically use their social media to interact with other people on food intake, dietary guideline and suggestions – all of which can impact their food choices. Hence, the way people use social media in their daily life is very important.

Throughout the decades, the Internet has changed how the individuals, communities and organisations share, create and consume information. Tat et al. (2014) indicate that this familiarity with Internet development such as social media could affect both individuals and society as a whole. With advanced technology, social media can be considered as the main source of media that influence people's food choices because the food that is advertised or shared on social media can affect the way the consumers select their food (Belitz & Frank, 2010).

Furthermore, the food and beverage industry has also increased their usage of social media lately (Perumal, Krisnan & Abdul Halim, 2017). This development eases the work of everyone especially for people in foodservice industry to set up their own page in promoting or advertising their goods or foods on platforms such as Facebook, YouTube, Instagram or any other social sites (Perumal, Krisnan & Abd. Halim, 2017). Belitz and Franks (2010) believed that viewing food advertisement on social media would increase people's appetite no matter what kind of food they are viewing. This is especially true because people tend to eat more when they are watching food advertisement on social media (Tan & Loo, 2014). It was proven that social media can impart huge influence and tackle generation Y's food choices especially due to the increment of technology in this generation (Hanan & Ab. Karim, 2015).

There are several studies done on consumers' food choice that is affected by social media. Wong et al. (2014) have studied the influence of social media on the health of adolescents and young adults, while Halford, et al. (2003) pointed out that the exposure of television (TV)



advertisement is related to food and would affect children's eating behaviour. Other than that, some researchers found that there are a million posts using the hashtag *#foodporn* regularly used in Instagram posts. It shows glamorous, presentable and delicious food with its location tagged (Hoogstins, 2017). Thus, it has become a trend to find food pictures on social media. In relation to this, the current study intends to look into the relations between social media and the food choices people make (Nguyen et al., 2017), recognising the impact of social media on people's food decision making such as their food intake pattern, nutritional requirements and health condition etcetera.

Hence, the objectives of the study include: (i) to examine the audio-visual appearance of social media on food choices among social media users; (ii) to examine the information sharing and delivery of social media on food choices, and (iii) to determine the relationship of peer pressure of social media on food choices among social media users.

## **2. Literature Review**

### **2.1 Audio-Visual Appearance of Social Media**

Social media exposes its users with stimulation especially on sight and hearing senses. Audio visual plays a huge role as sight and hearing play a part in influencing a person's decision making (Halford, Gillespei, Brown, Pontin & Dovey, 2004). Social media such as Instagram, allows its users to post photos and videos on its site making its usage of photo editing more appealing. This way, people can make their food posts appear to be more attractive and might cause other users of Instagram to perceive that the food is delicious. Taste, smell and appearance are among the main individual-level factors that influence students' food choices (Murimi et al., 2016). Tan and Loo (2014) found that the element of social roles or images is one of the critical elements to be taken into consideration when university students are targeted by advertisements of food using social media, while Hong et al. (2017) found that consumers value neither the good nutrition nor the cosy sentiment. Instead, they enjoy instant meals, frozen food, and junk food that are easily available at convenience stores because eating these foods is interesting.

### **2.2 Information Sharing and Delivery of Social Media**

Information sharing and delivery are very important as people can only know about something when the information has been successfully sent to and received by them. In relation to social media, it is undeniable that social media is at the peak of the moment in terms of information sharing and delivery. Nowadays, everything is merely one-click away to get shared throughout the globe. According to Dahl et al.(2016), social media has become popular as a communication tool and has potential to play a major role in shaping the social norms through the effectiveness in information sharing. On another note, Belitz et al. (2010) contended that people who watch unhealthy food-related television advertisements are expected to consume more food (healthy and unhealthy) than those who watch healthy advertisements. Rutsaert et al. (2013) wrote that the online information environment has evolved from Web 1.0 where users only used the internet for searching and seeking for information to Web 2.0, a world where they can independently generate and spread information. Meanwhile, Shan et al. (2015) found that it is clear that to a certain extent, social media has succeeded to penetrate organisations' long-established query and complaint services.



### **2.3 Peer Pressure through Social Media**

Peer pressure is inevitable when living in a society. It can influence someone whether they realise it or not. The same can be said when it comes to social media. When colleagues or friends share their lifestyle on social media, it will trigger one to do the same, as one does not want to feel left out. Zhao, Grasmuck and Martin (2008) described that social media gives the opportunity for users to control how they present themselves to their social network and how others perceive them to be. Zhao et al. (2008) found that among college-aged women, most of the time spent on Facebook is due to frequent physical appearance comparisons. Besides that, Vaterlaus et al. (2015) found that food-related posts on social media can influence young adults on their appetite and their food choices. This influences their choices of food to be consumed.

### **2.4 Impact of Social Media on Food Choices**

Social media has been widely used all across the globe nowadays. It would be so bizarre and outdated to find anyone not using social media at least once in their life. According to Fuchs (2017), the term "social media" became popular in describing the types of World Wide Web (WWW) applications such as Twitter, video-/image-/file-sharing or other kinds of applications that can be shared with others in the past years. Pfeffer et al. (2014) stated that within hours, negative opinions about certain companies can be shared through thousands or millions of people. It is defined as an online firestorm as the sudden discharge of large quantities of messages may contain negative words of mouth (WOM) and complaint behaviour against a person, company or group in social media networks. These messages usually contain intense indignation without pointing to actual specific criticism. It is identified that social interaction can influence food choices and portions among young adults (McFerran, Dahl, Fitzsimons & Morales, 2010).

## **3. Methodology**

### **3.1 Research Design**

This research focuses on how social media can actually influence people's food choices. Since the main objective of this research is to analyse whether social media affects people's food choices or not, this research uses a quantitative approach in which the method used to collect all the required data was by distributing questionnaire.

### **3.2 Unit Analysis**

The respondents were among the students at Universiti Teknologi MARA; the samples were students that have a social media account, be it Twitter, Instagram or Facebook. Having one of the social media accounts is enough to determine that the respondents are familiar to social media. Thus, data for this study were collected individually through distribution on social media. This method was to ensure that the questionnaire was answered by the people who are familiar with social media. The questionnaire was disseminated through social media and answered individually in order to provide an accurate response from the respondents. The platform for distribution was via Facebook, Twitter and Instagram.



### 3.3 Population and Sampling

This research was conducted by using the population of students at UiTM Puncak Alam that had the estimated number of 18,455 students. According to Krejcie and Morgan (1970), for that number of students, a sample size of 350 respondents is sufficient.

### 3.4 Instrumentation

An online-questionnaire or network sampling was used and distributed through social media for one week in November 2018. Then, it was reposted for another week in early December and boosted again on the same media until a total of 350 respondents were reached. Data were collected between November 2018 until January 2019. The questions made were specifically designed to acquire participants' level of social media connection and how it affects their food choices. Participants of this survey were encouraged to answer frankly and honestly. The questionnaires used 5 Likert scale rating between strongly disagree to strongly agree. All items had been screened in pilot study which resulted to 0.7 above.

### 3.5 Data Collection Process

The questionnaire was distributed through social media platform in which data were collected from the respondents who were the users of social media and thus, very familiar with it. Through this network sampling, respondents were drawn through random selection of links in a network. This eased the work to gather all the data needed for this study since this method is related with the selected topic on social media (Shone, 2015). The questionnaire was prepared in English, proof read and reviewed by a language expert. The data were later analysed using SPSS software version 22.

## 4.0 Findings and Analysis

### 4.1 Demographics

Table 1 shows the demographics and background of the respondents. 350 respondents participated and more female students (n=246) answered this questionnaire compared to their male counterpart (n=104). The table also shows that females consisted 70.3% of the total respondents who answered the questionnaire.

**Table 1: Respondents demographic (n=350)**

No	Items	Total	Percent (%)
1	Familiarity with Social Media	350	
2	Start using social media		
	Elementary	62	17.7
	Secondary	239	68.3
	University	49	14.0
3	Male	104	29.7
4	Female	246	70.3
5	Age		
	18-21 years	74	21.1
	22-25 years	246	70.3
	26-29 years	13	3.7
	30 and above	17	4.9
6	Education level		
	Diploma	69	19.7
	Degree	258	73.7
	Masters	20	5.7



	Others	3	0.9
7 Marital status	Single	338	96.6
	Married	12	3.4

From the table above, the most dominant age range is from the group of 22 to 25 years old which is 70.3% from total sample population. Meanwhile, 18 to 21 years old is the second age group that uses social media the most with 74 out of 350 that is 21.1%. This is followed by 30 and above with 17 respondents or 4.9%, and lastly, 26-29 years old age range only consists of 3.7% out of the 100% and this might indirectly prove that this age range uses social media the least.

Education level of the respondents shows that Degree students are the highest number with 258 out of 350 respondents. That value makes 73.7% out of the total percentage. The second highest group is the Diploma students with 69 respondents which makes 19.7% out of the total percentage. The Master's Degree students make 5.7% with 25 respondents out of the total 350. Most of the respondents are single, 338 (96.6%) from 350 total respondents, while the remaining 12 respondents are married, which is 3.4% out of the total respondents.

Familiarity with social media means that the respondents are familiar with the social media. All of the respondents (100%) are familiar with the social media. This means that all of the respondents are already familiar with the social media. As for the question of how long the person has been using the social media the table shows that most of the respondents have started using social media since their secondary school with 239 respondents or 68.3% of all respondents. This is followed by the group that have started using social media since elementary school with 62 respondents or 17.7% out of the total respondents and lastly, those that have started using social media at the university level with 49 respondents or 14.0% out of the total data.

Table 2 summarises the number of hours the respondents spend per day on social media usage. Most of the respondents spend more than 3 hours on social media with 165 respondents (47.1%). Meanwhile, 112 or 32.0% of the respondents spend 1 to 3 hours on social media, 54 or 15.4% of the respondents spend 30 minutes to 1 hour on social media, 17 respondents spend 15 to 30 minutes on social media per day and only 2 respondents spend none of their time on the social media per day.

As for the most preferred social platform, Instagram is the most preferred social media with 212 respondents (57%). Facebook comes second with 87 respondents (23.4%), while Twitter was preferred by 50 respondents (13.4%). This is followed by others with 23 respondents (6.2%).

The reason for using the social media are primarily for watching video with 281 (23.5%) of the total percentage. Socialising is at the second place with 273 respondents or 22.9% out of the total percentage. This is followed by chatting with 184 or 15.4% respondents at the third place, listening to music with 172 (14.4%) respondents, shopping with 144 (12.1%), downloading music/video 110 (9.2%), uploading music/video with 22 (1.8%) and lastly, 8 respondents (0.7%) use social media for blogging.



**Table 2: Respondents familiarity with Social Media (n=350)**

No	Items	Total	Percent (%)
1	Familiarity with Social Media	350	100
2	Start using social media		
	Elementary	62	17.7
	Secondary	239	68.3
	University	49	14.0
3	Duration spent per day		
	None	2	0.6
	15-30 minutes	17	4.9
	30 min-1 hour	54	15.4
	1 – 3 hours	112	32
	More 3 hours	165	47.1
4	Preferred social media platform		
	Facebook	80	22.9
	Twitter	46	13.1
	Instagram	204	58.3
	Others	20	5.7
5	Reasons for using Social Media		
	Downloading music/video	110	9.2
	Uploading music/video	22	1.8
	Blogging	8	0.7
	Watching a video	281	23.5
	Chatting	184	15.4
	Listening to music	172	14.4
	Socializing	273	27.9
	Shopping	144	12.1

## 4.2 Factors Influencing Food Choice

This section covers the first independent variable in the framework which is audio and visual. Audio and visual refer to how the audio and visual relate to food posts on social media influence respondents' food choices. Respondents were asked on how a certain audio and visuals characteristics on the social media influence their food choices.

As seen in Table 3, the highest mean score was recorded by the option visual quality influences food choices. The mean score is 4.24 ( $M=4.24$ ,  $sd=0.86$ ) with standard deviation of 0.86. With that mean score, it is clear that the videos shown in the social media influence the food choices among the social media users the most. This information can be used by any food businesses to focus their promotions on the social media by using videos as a lot of social media users are influenced the most with the videos shown in the social media.



**Table 3: Mean Audio and Visual (n=350)**

No	Items	Mean	Std Deviation
<b><i>Audio and visual</i></b>			
1	Audio quality influence food choice	3.75	0.93
2	Visual quality influence food choice	4.24	0.80
3	Still images influence food choice	4.04	0.82
4	Videos influence food choice	4.23	0.75
5	GIF's influence food choice	3.41	1.06
6	Colours of photos influence food choice	4.06	0.91
7	Colours of videos influence food choice	4.08	0.86
8	Clarity of the sound on video influence food choice	3.77	1.09
9	The way host eating influence food choice	3.99	0.93
10	Food appearance affect appetite	4.13	0.79
11	Sound of people eating influence food choice	3.23	1.11
12	Model in advertisements influence food choice	3.19	1.16
13	Attractiveness from sound of people eating	3.31	1.24
14	Uniqueness of food	4.05	0.82
15	Creativeness of food	4.10	0.76

### 4.3 Information Sharing and Delivery

Information sharing and delivery refers to how the information shared and delivered on food posts through social media can influence your food choices. The table below shows which specific advantage of information sharing and delivery through social media is the most effective in influencing the food choices among social media users.

From Table 4 below, it is found that "Information can be shared to a wider population" is the most influencing factor with a mean score of 4.48 ( $M=4.48$ ,  $sd=0.60$ ) and standard deviation of 0.60. This finding proves that the ease of sharing the information to a wider population by using social media is the most influencing factor when it comes to the food choices among social media users. This is undeniably true, as sharing information on social media is at one's fingertips.

**Table 4: Information shared and delivered influence my food choices (n=350)**

No	Items	Mean	Std Dev.
<b><i>Information sharing and Delivery</i></b>			
1	It is easy to share info on food	4.47	0.61
2	Information shared to wider population	4.48	0.60
3	Information shared domestically	4.36	0.67
4	Information shared globally	4.41	0.65
5	Information delivered to wider population	4.38	0.67
6	Information of food made me want to try	4.26	0.75
7	Information of food hinders me from trying	3.76	0.90
8	Information of food made me crave	4.11	0.81
9	Information of food made me being selective	3.70	1.03
10	Information of food made me avoid the food	3.53	1.14
11	It is easy to find info on food	4.25	0.69
12	Social media deliver info on food	4.20	0.71
13	Social media deliver knowledge on food	4.11	0.74
14	Number of shared info on social media affects my purchase intention	4.07	0.84



#### 4.4 Peer Pressure

Peer pressure refers to how the peers around you influence your food choices by posting pictures and videos on food through social media. In this section, the study intends to investigate which peers give the highest impact to the food choices among the social media users.

Table 5 below demonstrates that the factor “Most of my friends use social media” as the most influencing factor as it has the highest mean score of 4.61 ( $M=4.61$ ,  $sd=0.61$ ), with the standard deviation of 0.61. This result indicates that the number of friends using the social media influences the food choices of social media users the most. This result can also be supported by the facts that any factors involving friends are relatively higher compared to family and relatives as shown in the tables above.

#### 4.5 Impact on food choices

This section covers the dependent variable which is the impact of social media on food choices. Respondents have been asked three different independent variables prior to this section of questionnaire. In this section, the respondents were asked how the social media ultimately affects their food choices after all of those independent variables.

The results obtained from this section are quite underwhelming as the social media ultimately just impact the food choices of social media users with 4.06 as their mean score ( $M=4.06$ ,  $sd=0.86$ ), with the standard deviation of 0.86. This shows that social media indeed has an impact towards the food choices of the social media users. This has been, ultimately, how social media impacts most of the social media users’ food choices.

**Table 5: Peer Pressure influence food choice**

No	Item	Mean	Std Dev
<b>Peer pressure</b>			
1	Most of my friends use social media	4.60	0.61
2	My friends post pictures of food	4.12	0.83
3	My friends post videos of food	3.94	0.95
4	My family use social media	3.97	1.00
5	My family posts pictures of food	3.39	1.09
6	My family post videos of food	3.27	1.15
7	My friends influence my food choice through social media	3.83	0.89
8	My family influence my food choice through social media	3.39	1.08
9	My relatives influence my food choice through social media	3.49	1.07
10	My friends recommend food through social media	4.00	0.84
11	My family recommend food through social media	3.40	1.11
12	My relatives recommend food through social media	3.37	1.15
13	My friends shared their experience trying food on social media	4.00	0.89
14	My family shared their experience trying food on social media	3.36	1.15
15	My relatives shared their experience trying food on social media	3.42	1.27



<b><i>Impact on food choices</i></b>			
1	Social media impacts my food choice	4.06	0.87
2	Social media influence my food choice	4.01	0.89
3	Social media changed my eating pattern	3.48	1.10
4	Social media changed the way I choose food	3.65	0.99
5	I felt hungry when I see food on social media	4.00	0.91
6	I want to eat the food right away whenever I see it on social media	3.69	1.10
7	I always select the food I saw on social media	3.50	1.10
8	I always choose food I saw on social media	3.50	1.04
9	I am curious to try food on social media	4.00	0.85
10	Numbers of views on social media affect my food choice	3.81	1.07

#### **4.6 The relationship between audio visual, information sharing and delivery and peer pressure with food choices**

Table 6 below shows the outcome of Pearson's Correlation test conducted between audio and visual, with the dependent variables and its impact on food choices. The results revealed that the relationship is  $R=0.71$ . Sekaran (2016) stated that if the values lie between 0.60 and 0.79, it is considered as moderate high correlation or specifically, there is moderately high correlation between audio and visual, with social media users' food choices. As for information sharing and delivery, there is  $R=0.55$  relationship with social media food choices. Values that lie between 0.40 and 0.59 and is considered as moderately correlated (Sekaran, 2016), thus showing information sharing and delivery to be moderately correlated with food choices. Peer pressure results reveal that Pearson Correlation is  $R=0.60$  which is moderate high correlation. This value clarifies that peer pressure has 60.0% significant relationship with the social media users' food choices.

**Table 6: Results of Pearson's Correlation and its Indication**

<b>Independent Variables</b>	<b>Pearson Correlation (Impact on Food Choices)</b>	<b>Indication</b>
Audio and Visual	0.71**	Moderately High Correlate
Information Sharing and Delivery	0.55**	Moderately Correlate
Peer Pressure	0.60**	Moderately High Correlate

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

## **5.0 CONCLUSIONS**

Based on the analysis conducted, it can be concluded that the results show that the factors which are audio and visual, information sharing and delivery, and peer pressure are related to social media users' food choices. As a conclusion, social media does have an influence over social media users' food choices especially because of audio and visual quality, the information shared and delivered on social media, and peer pressures among social media users.

For the demographics, this study found that most participants who answered the questionnaire are females compared to males. The most dominant age range for this study is between 22



to 25 years old. It shows that most students use social media. From the findings on the educational level, most of the respondents are Degree students meaning they have either Diploma or STPM compared to other education levels. The findings also show that the respondents are mostly single and all respondents are familiar with social media. Furthermore, most of the respondents started using social media when they were in secondary school. Moreover, the duration of time spent on social media per day is 3 hours and most respondents use Instagram due to the highest number of preference on this social media platform. Other than that, the researchers also found that most of the respondents prefer to watch video on their social media since the result shows that the purpose of using social media is mostly for watching video followed by socialising, chatting, listening to music etcetera.

In this study, the relationship between an audio and visual appearance on social media that can influence food choices is examined. Based on the analysis conducted, the respondents agreed that this factor does influence their food choices especially when they watch videos played on social media. It shows that people are easily influenced to change their food intake or choices by watching videos on social media. According to Tan and Loo (2014), the element of social roles or images is one of the critical elements to be taken into consideration when university students are targeted of an advertisement of food using social media. These studies support the findings of the current study really well as the results show that there is a moderately high correlation between the audiovisual factors and the people's food choices. When watching the videos, they also consider the audio and visual quality presented on the video, and also the way the food is presented on screen affects the appetite the person who sees it. People are more attracted to try and eat the food when there is some uniqueness on the food that they never try or see before but people are less attracted to the sound of people eating. Their food choices are also less influenced by the models that advertise the food. Other than videos, people are also influenced by the images of food posted on social media with the clarity of colours that make the photo look tempting and more vibrant. How the food looks when they see it is a crucial phase where it will determine whether the food presented is eye-catching or not due to the phrase 'you eat with your eyes first'.

Information about food shared and delivered on social media has relationship with food choices. The information shared with a wider population has the highest advantage when using social media in posting food pictures. It can be considered as the most influencing factor in delivering and sharing information about food. According to Dahl et al. (2016), social media has become popular as a communication tool and has the potential to play a major role in shaping the social norms through the effectiveness in information sharing. This study found that information sharing and delivery has its own role in influencing people's food choices. Based on the result, it is undeniable that all the information shared and delivered on social media regarding food is the factor that contributes to the impact on food choices among social media users. The respondents agreed that they can find information about food on social media since it can be shared and delivered globally to a wider population.

Aside from that, this study also analyses the relationship between peer pressure in social media on people's food choices. It was found that most of the respondents are very familiar with social media since they all use it. Interestingly, the number of respondent's friend is higher than the respondent's family and relatives. This indicates that friends may affect people's food choices more compared to family and relatives.

Lastly, the relationship between social media factors on its users' food choices. The result obtained shows that all of the respondents agreed that social media impacts their food choices and their food selection. Vaterlaus et al. (2015) found that food-related posts on social media can influence young adults' appetite and their food choice. This statement also supports our findings where food-related posts can indeed influence the social media users as stated



above. Users are always attracted whenever they see food advertisement or food pictures posted on social media. Other than that, their curiosity in trying the food posted on social media is the main reason why it may influence their food choices.

Therefore, it can be concluded that the social media platform does influence and impact its users' food choices. The majority of the respondents knows and understands what the factor that influences their food choices is. In this study however, there is no negative or positive impact on people's food choices since it is based on personal and individual preferences. Thus, it can be a very usable and a reliable result to be used by food business or food establishment as a reference in promoting their product.

As a conclusion, the results of this study show that all the respondents agreed that the audio and visual appearance on food through social media has substantially positive relationship with social media users' food choices. The video played on social media and food appearance are the characteristics that contribute to social media users' food choices. Hence, the way food is displayed on social media also influences users' food choices since it is related to people's desires and wants.

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## **Students' Opinion on a Language Game: A Preliminary Study on MonoEnglish**

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### **Abstract**

This study was conducted with the aim to investigate ESL students' opinion on the usefulness of the language game on ESL learning, in relation to affective domain, and their opinion on how the game can be improved. The game was designed by four ESL students and supervised by their lecturer within 3 weeks. It was then played by a class of ESL students (n=28) for four ESL lessons. A set of questionnaires was distributed to the students to answer the research questions. The findings revealed that the respondents agreed the game was useful on ESL learning. It aided to improve their English language skills (median = 4.00), helped them learn English while having fun (median = 4.50) and improved their knowledge about English language (median = 4.00). Respondents would recommend the game to other people (median = 4.50), and they wanted to play the game in their English class (median = 4.50). In relation to affective domain, the game motivated them to use English (median = 4.00) and they were excited to learn English when playing the game (median = 4.00) and became more confident to use English after playing the game (median = 4.00). The respondents also believed that the game needed improvement in its appearance (57.1%, n=16), content (42.9%, n=12) and rules (35.7%, n=10). Their comments revealed four themes which are compliments, suggestions to improve



the game, benefits, and others. Discussions of the results and future research recommendations are also included in this paper.

**Keywords:** *language games, game-based learning, gamification, ESL learners*

## **1. Introduction**

The use of language games in the process of teaching and learning has long been studied in the field of English as a second language. However, studies on language games that are created by students are scarce as compared to the studies on language games that are created by instructors and professionals (e.g. Wahyuni & Junior, 2018; Fung & Min, 2016; Ghazal & Singh, 2016; Cheng, Liao, & Chang; 2018). Playing games in the classroom will encourage students to learn better. This is because game-based learning (GBL) is a learner-centred approach whereby students are in control of their own learning. Therefore, an attempt has been made to guide four ESL students in creating a language game and a study has been conducted to investigate ESL students' opinion on the language game.

The objectives of this study are:

- i. To investigate ESL students' opinion on the usefulness of the language game on ESL learning
- ii. To investigate ESL students' opinion on the usefulness of the language game in relation to affective domain
- iii. To investigate ESL students' opinion on how the game can be improved.

## **2. Literature Review**

### **2.1 Game-based Learning (GBL)**

Game-based learning (GBL) is one of the methods that teachers can apply in a teaching and learning process. The method emphasizes more on the activities that the students do during the process of learning which is 'playing' and 'learning.' It is important to note that the term 'games' are not limited to digital or video games only. The criteria that the games must fulfill are there must be a clear and defined learning outcome and some learning must take place. It should also be fun and enjoyable activities which use English as the instructional language and are conducted with some rules to reach a goal. The games could be presented in different ways to the class at the appropriate moment to create a positive atmosphere for learning without thinking about learning (Ahmad Zubaidi, 2015; Ghazal & Singh, 2016; Wahyuni & Junior, 2018). Teachers and students can design new games or create variations of old games to be used in the classroom. In developing the language board games, Stages of Designing Process proposed by Pesce in 2015 (as cited in Wahyuni & Junior, 2018) can be referred.



**Table 1: Stages of Designing Process**

<b>Stage 1</b>	<i>Looking at Examples</i>	Students play a number of games which are provided, created by someone else. In this stage, students try to comprehend how the games work as well as identify the strategies used in the games.
<b>Stage 2</b>	<i>Developing Ideas</i>	Students share ideas within groups, then make a detailed plan for the games they will create.
<b>Stage 3</b>	<i>Creating Game</i>	Each group of students produces a detailed design, makes it up and checks the finished version.
<b>Stage 4</b>	<i>Testing and Evaluating</i>	The groups of the students exchange games and test them. When they are returned, each group assess its own game.

## 2.2 A Zone of Proximal Development

A zone of proximal development can be utilized in GBL. It is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers. Guidance will be given in the form of scaffolding. Scaffolding is a temporary instructional support that helps students to understand complex concepts. The instructional support is slowly withdrawn when students are familiar with the concept and they can solve the problems on their own (Vygotsky, 1978).

## 2.3 Motivation

Motivation is a biggest problem that an ESL instructor might face in the classroom. Keller's ARCS Motivational Model is introduced by Keller (2010) to describe students' motivation. There are four categories in the model namely Attention, Relevance, Confidence, and Satisfaction. The students are demotivated due to not interested in the learning material or they are too intimidated by it. To solve this problem, GBL can be implemented in teaching and learning process. GBL promotes learner - centred pedagogy as it allows the students to be active participants. Games with difficult but achievable challenges and self-rewards can capture and engaged the students' attention. As a result, they will not be easily bored even though the activity is repetitive, and they will give their best when playing the games. They will be more motivated when they can immediately see the result of their actions; the progress that they have made in order to master a set of content or skill through continuous feedback (Csikszentmihalyi, 1975; Ghazal & Singh, 2016). Classroom instruction such as pair and group activities also influence the students' level of motivation according to a study conducted by Kurt and Kurt (2018). The study revealed activities such as games, songs and materials including info-gap, problem solving, matching, puzzle, card games, picture description activities as the most motivating instructional practices. The students feel enthusiastic and energetic when the activities were conducted in a competitive way.



## 2.4 Grammar and Vocabulary

Grammar and vocabulary are imperative in learning English. To make the learning meaningful and help the students to retain the information longer, GBL should be applied. The students will enjoy, motivated and not feel stress but at the same time they can learn something. It helps them to learn new words and phrases that appear in the games and also recall existing vocabulary. They can also use the vocabulary and grammar learnt in appropriate situation (Huyen & Nga, 2003; Cam & Tran, 2017).

## 2.5 Speaking and Listening

Using GBL can eliminate the students' anxiety to speak English and they will be confident to use the language. This is because students were more relaxed and excited to use and speak the language while playing games. The language learning in classroom will become less stressful and enjoyable. This can be seen from a study conducted by Fung and Min (2016) and Ahmad Zubaidi (2015) that the students are confident when delivering ideas. It increased their confidence level when they were able to perform in subsequent game rounds and in class activities. Positive learning among peers is also established as they are learning from each other in the classroom. They are motivated to speak after watching their friends' presentation. They were able to build a sense of control because when there is less pressure, they will learn something better. They will become confident and their performance will improve.

When the students are able to speak, they can also listen. This is because speaking and listening skills are related. Listening can be demotivating for students when it just involved drilling. Hence, interesting activities through GBL can make the learning of listening more enjoyable to students. Students can practice listening via listening texts, short video activities, and song activities. It is found that songs were the most motivating listening activities in classroom (Kurt & Kurt, 2018). Focusing and listening to their friends while playing also improves students' listening skill. Students need to focus and listen attentively to the questions that are being asked by their peers to be able to answer them correctly (Sasidharan & Tan, 2013).

## 2.6 Reading and Writing

Reading is important for students to excel in schools. To improve and master reading skill, student can learn the skill via GBL. According to Aliza, Zahara and Rohaty (2011), students' reading skill has improved after they play games. It is observed that students were able to recognize letters, say the sound of the syllables, and form a word from printed materials and objects. They can also name the words as they spelled the words during the activities.

Apart from reading skill, writing skill is also crucial for students to learn. However, writing can be difficult to some. To make learning the skill easier, students can learn writing skill through GBL. Playing games proves that it can make the students to write better. A study conducted by Cheng, Liao, and Chang (2018) demonstrates that students not only improve reading but also in summary writing. There are changes of the students' summaries after they play the game in the study. The students improved their summaries in terms of the numbers of main ideas and words.



### **3. Methodology**

A group of four students were given 3 weeks to design and create their language game while supervised by their lecturer. The students decided to adapt the concept of the Monopoly game by Hasbro and set new rules and tasks that were more suitable for an English language game. The game was then played by a class of ESL students during four ESL lessons.

A questionnaire was distributed to the participants after the fourth lesson to investigate their opinion on the usefulness of the language game, MonoEnglish, and to find out suggestions for improvement. The questionnaire was divided into 3 main sections:

- i. The usefulness of the game on ESL learning (5 Likert-scale items + 1 checkbox items)
- ii. The usefulness of the game in relation to affective domain (3 Likert-scale items)
- iii. Suggestions to improve the game (1 checkbox item + 1 open-ended item).

The data was analyzed using IBM SPSS Statistics 25 in order to answer the research questions and the findings were presented in the form of descriptive statistics. The Likert-scale items (8 items) were first checked with Shapiro-Wilk test of normality and Cronbach alpha was utilized to check their reliability. The open-ended item was analyzed using thematic analysis and the themes from it were presented with the verbatim comments.

#### **3.1 How to Play the Game**

The game has to be played according to these rules:

- i. MonoEnglish can be played by a maximum of 4 players and a minimum of 2 players.
- ii. Each player chooses one color to represent them.
- iii. Players take turn to roll the dice once.
- iv. If players get an even number, they will pick a card in the even number section. If players get an odd number, they will pick a card in the odd number section.
- v. Each player has to answer the question on the card in 1 minute. The question can fall under these 4 sections: vocabulary, speaking, riddle and grammar.
- vi. If the question requires the players to build sentences, the sentences have to include an exclamatory sentence, an interrogative sentence, and an imperative sentence.
- vii. If the players answer the question correctly, they will get the points as stated on the card.
- viii. The game ends after three rounds.
- ix. The player with the highest points wins the game.



#### 4. Findings and Discussion

The findings are presented according to the research questions:

- i. To investigate ESL students' opinion on the usefulness of the language game on ESL learning
- ii. To investigate ESL students' opinion on the usefulness of the language game in relation to affective domain
- iii. To investigate ESL students' opinion on how the game can be improved.

**Table 2: Shapiro-Wilk Test of Normality**

Tests of Normality						
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SKILLS	.312	28	.000	.775	28	.000
FUN	.312	28	.000	.757	28	.000
KNOWLEDGE	.326	28	.000	.755	28	.000
RECOMMEND	.316	28	.000	.745	28	.000
PLAY	.316	28	.000	.745	28	.000
MOTIVATE	.364	28	.000	.713	28	.000
EXCITED	.344	28	.000	.748	28	.000
CONFIDENT	.290	28	.000	.776	28	.000
a. Lilliefors Significance Correction						

From the table above, it can be seen that the Sig. value of each Likert-scale item for the Shapiro-Wilk statistic was .000, suggesting violation of the assumption of normality (Pallant, 2016). Therefore, the median of each item was used instead of mean to report the descriptive analysis.

##### 4.1 The Usefulness of the Game on ESL Learning

**Table 3: Cronbach Alpha Reliability Test**

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.863	.863	5

From the table above, it can be seen that all 5 Likert-scale items in this section had high reliability, with Cronbach alpha = 0.863.



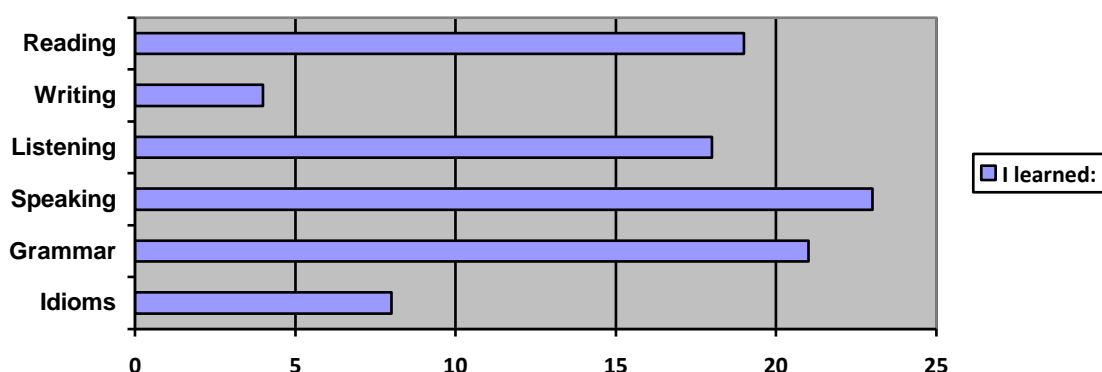
**Table 4: Frequencies on the Usefulness of the Game on ESL Learning**

		Statistics				
		SKILLS	FUN	KNOWLEDGE	RECOMMEND	PLAY
N	Valid	28	28	28	28	28
	Missing	0	0	0	0	0
Median		4.00	4.50	4.00	4.50	4.50
Std. Deviation		.630	.685	.600	.634	.634
Percentiles	25	4.00	4.00	4.00	4.00	4.00
	50	4.00	4.50	4.00	4.50	4.50
	75	5.00	5.00	5.00	5.00	5.00

From the table above, it is clear that all 5 Likert-scale items were rated positively by the respondents. The respondents agreed that the game helped improve their English language skills (median = 4.00), helped them learn English while having fun (median = 4.50), improved their knowledge about English language (median = 4.00), they would recommend the game to other people (median = 4.50), and they wanted to play the game in their English class (median = 4.50).

These findings were in tandem with the findings from the existing literature whereby students reported improvement in reading (e.g. Aliza, Zahara, & Rohaty, 2011; Cheng, Liao, & Chang, 2018), summary writing (Cheng, Liao, & Chang, 2018), and speaking confidence (Fung & Min, 2016) after playing the language games. The findings also supported the view that learners were more likely to learn and enjoy the learning process the most when they acted as active recipient of knowledge (Ghazal & Singh, 2016). It can also be understood from the findings that students found the game useful to the extent that they wanted to play it in their English class and recommended it to other people.

In order to understand the English language skills that they learned from the game, the respondents were asked to choose from a list and they were informed that they could choose more than 1 skill. The figure below reports the findings:



**Figure 1: English Language Skills Learned from The Game**



It was found that 82.1% of the respondents (n=23) chose speaking as the skill that they learned from the game followed by grammar (75%, n=21), reading (67.9%, n=19), listening (64.3%, n=18), idioms (28.6%, n=8), and writing (14.3%, n=4).

#### 4.2 The Usefulness of the Game in Relation to Affective Domain

**Table 5: Cronbach Alpha Reliability Test**

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.824	.845	3

The table above shows that the 3 Likert-scale items for this section had high reliability, with Cronbach alpha = 0.824.

**Table 6: Frequencies on the Usefulness of the Game in Relation to Affective Domain**

		Statistics		
		MOTIVATE	EXCITED	CONFIDENT
N	Valid	28	28	28
	Missing	0	0	0
Median		4.00	4.00	4.00
Std. Deviation		.548	.585	.763
Percentiles	25	4.00	4.00	4.00
	50	4.00	4.00	4.00
	75	5.00	5.00	5.00

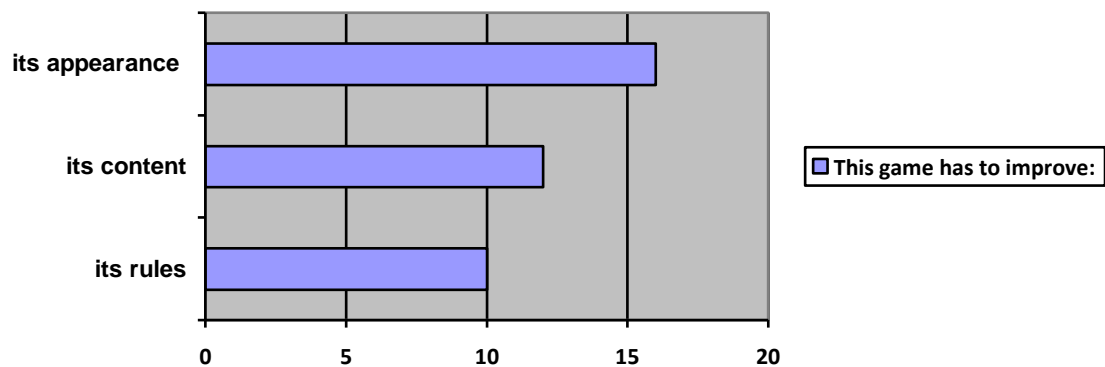
From the table above, it can be reported that the respondents rated the 3 Likert-scale items in this section positively. The respondents agreed that the game motivated them to use English (median = 4.00), they were excited to learn English when they played the game (median = 4.00), and they became more confident to use English after playing the game (median = 4.00).

These findings were aligned with the findings reported in the previous research whereby students reported increased confidence level after playing the games (e.g. Fung & Min, 2016; Ahmad Zubaidi, 2015) and excitement in learning the lesson when it involved playing games (Kurt & Kurt, 2018). Furthermore, the games also helped students to be an active participant of their own learning process and thus, motivated them when they saw the results of their actions (Csikszentmihalyi, 1975; Ghazal & Singh, 2016) in playing the games. The findings also support the previous study whereby games were listed as one of the motivating instructional practices (Kurt & Kurt, 2018) and when students felt good about their learning experience, they achieved satisfaction and felt motivated to learn (Keller, 2010).



### 4.3 Suggestions to Improve the Game

In this section, the respondents were asked to identify the elements that the game can improve on and provide their comments about the game.



**Figure 2: Suggestions to Improve the Game**

The figure shows that more than half of the respondents (57.1%, n=16) believed that the game needed to improve its appearance. This is followed by its content (42.9%, n=12) and its rules (35.7%, n=10).

An open-ended question was asked to the respondents in order to gather their comments about the game. A thematic analysis was carried out and these themes emerged from the analysis:

**Table 7: Comments about The Game**

Themes	Comments
Compliments	"Good", "Superb" "Gooddddddd ☺" "gg" "Great game!" "This game is awesome XD" "so nice Imma buy dis game and spread it to the world"
Suggestions to improve the game	"can be improve with new design of board game" "needs more improvement" "More colourful" "They need to make the games more adveture." "Good but more improvemen" "Make it more interest and colourful" "Make it more intresting with the appearance." "Improve the rules so that the winner be found" "Improve the game to make it more fun." "The game is so far so good but they must Fix the appearance of their game"
Benefits	"Fun games." "Best game, help me to improve" "I like this game because i have fun while learning English" "Fun"



	"The game is quite interesting because it can improve our skills and learn more about English" "I think this game is fun to play because we can learn through this game and improve our skills in English"
Others	"An easy game but with a touch of English knowledge" "crackly more better" "Ouh ok guys"

The four themes that emerged from the analysis were compliments, suggestions to improve the game, benefits, and others. In the compliments, the respondents provided positive comments like "good" and one respondent wanted to buy the game and played it with other people. However, the game also received strong comments on the need to improve the game, especially on its appearance. Other than that, some respondents mentioned the benefits that they reaped by playing the game, such as having fun while learning English language. Three other comments that were not included in these three categories were listed as others.

## 5. Conclusion and Recommendations

From the findings, it can be concluded that the game MonoEnglish has the potential to be implemented as an activity in an English language lesson. However, it must be highlighted that the study conducted was a case study and it was still in a preliminary level, therefore, the findings should not be generalized as the same study may reveal different results if conducted on a different sample. On a more positive note, nonetheless, the benefits reported by the students when they played the game should not be ignored as making English language lesson meaningful and fun can improve the teaching and learning process in the classroom.

Thus, it is recommended that educators try to guide students in designing their own language game. Educators can discover the students' interests when they attempt to create their own language game and also highlight the language skills that they mostly want to improve on. A similar study can be conducted and the results found may yield an interesting view to be compared with the findings in the current study. Future research can focus on a language game that highlights one of the main skills in English language, namely, listening, speaking, reading, and writing, and a quasi-experimental study is suggested to find out the effects of the language game on test scores.

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## **Analysis of Public Administrative Reforms: A Case in Afghanistan**

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### **Abstract**

During the era of transition until now, Afghanistan has been making steady progression in the form of growth. The Bonn Conference (2001) established in gesticulation a series of policy frameworks by introducing much operative civil service one of preferences of the Afghan government. The Afghan National Unity Government introduced reforms program so called "Realizing Self Reliance" in December 2014, as a result of Kabul and London Conferences upon Afghanistan by marking the commencement of "decade of transformation" (2014-2025). This study is qualitative in nature and the data were collected through secondary sources including various reports and newsletter from year 2002 to 2018 to attain the objective of this study. The current study reviews the local governance reforms in Afghanistan based on Afghan Government and international donors. This study highlights the reforms made by Independent Administrative Reforms and Civil Services Commission (IARCSC) and Independent Directorate of Local Governance. They have presented numerous reformed policies, programs, laws, regulations, and projects to address the issues in local since its inception. Priority Restructuring and Reform (PRR) program is one of them which was announced by IARCSC to backing more salaries for the crew of government, Sub--- National Governance Policy of IDLG sanctioned by the cabinet in 2010, primer of District Delivery Program (DDP) by IDLG, and the National Priority Program (NPP) for Local Governance and the NPP. These acts emphasize on refining local government in Afghanistan. The principal aim of NPP is to strengthen and promote leadership, institutional, organizational, administrative and individual capacities for governance at both central and local levels to enable service delivery, economic growth, justice, stabilization and security. These reforms will be applied by numerous government departments. The IARCSC grasps the central position in execution of NPP. The current study presents the short and long term policy recommendation at the district and provincial level to accomplish the goal of growth and development. This study is very significant for the Afghan government's official at central, provincial and district level as it provide the ways to overcome various issues which exist at local governance level.

**Keywords:** Public Administration, Reforms, Local Governance, Afghanistan

### **1. Introduction**

The Afghan government with the collaboration of its allies, have sought several initiatives to bring reforms in civil sectors since 2001 to properly govern all the departments in Afghanistan. Spreading governance to regions peripheral provincial centres have been a stimulating exertion, requiring large human and financial resources. Feeble in human and financial resources, the newly established government was solely not capable to grasp out to masses



or to deliver elementary services at first. Therefore, an amalgam model of Afghanistan and transnational efforts were implemented (Saltmarshe & Medhi, 2011).

According to Nixon (2008) the international organizations have betrothed widely official and non-official mechanism of local governance system in Afghanistan. Nevertheless, the good intents and ample support on the ground from these organizations have been made to boost the political status quo. Such jumbo aids given by these international organizations have helped in the establishment of governance infrastructure but have glorified expectation too.

Since 2014, the imminent decline of global contribution in Afghanistan, presents challenges for prolonging government summons and services throughout Afghanistan. This study sought to discuss the imperious of performing further with scarce properties in the scope of local governance. One fundamental postulation of study is that local governance systems is non-adequate presence in Afghanistan. Blends of official and non-official organizations run at the local level that is involved in delivery of fundamental services to the masses. This study delivers an outline of administrative reforms established since 2001 at local levels, and the challenges to spreading receptive governance at the local level. The study documents what kind of challenges might ascend at the local level as foreign aids stop and what kind of Public Administrative Reform (PAR) ingenuities at district level can retort to such challenges (Government of Afghanistan, 2003).

## **2. Objectives**

The key aims of the current study are:

- i. To review the assistance made by donors across the world for bringing key policy reforms in public administration.
- ii. To review the initiative taken by Afghan government towards public administration reforms.
- iii. To provide suggestions in order to strengthen public administration reforms at Local level.

## **3. Methodology**

The current study is qualitative in nature and based on secondary sources which rely on the studies conducted by earlier researchers, as well as various types of reports and newsletters from 2002 to 2018.

### **3.1 Overview of the Situation**

The world has witnessed that more than three decades of war have dispensed severe shocks to the entire organizations and infrastructure in Afghanistan. With Afghanistan being twisted into wreckage, several of its capable people were killed or escaped as refugee. The transnational alliance intrusion of 2001 transported hope for Afghan nationals. A fresh government came into being and abundant was assumed from that. Though, its capability and capitals were scarce to fulfil the essential challenges ranging from provision of fundamental services to the masses of Afghanistan (GIROA, 2015).

Approximately around 11 years, the majority of rebuilding devotion was given to structuring capability and organizations at the principal level. Recently, the local government and administration were quite snubbed. And hitherto local administration is the first and sometimes the only point of contact between the majority of Afghan citizens and their government. The



necessity to improve local administration has been documented in several national documents, like Afghanistan National Development Strategy (ANDS), and the successive NPP. Still, their execution to date has not been operative (Government of Afghanistan, 2008).

During the early post-Taliban ages, ample consideration was given to rapid influence projects at sub-national level to recover structure for the delivery of fundamental services. This attempt was conducted largely by the donor agency via PRTs and other international NGOs. The ultimate mission of reforming and construction local administration was believed to be less significant to short term objectives of influential projects. In most of the projects, attention to participation and strengthening governance structures in the delivery of projects and services has been the exception rather than the rule, since both donors and government were striving to demonstrate a quick impact in a very difficult environment (Asia Foundation's Assessment, 2007)

However on one way, one of the US unit, the Provincial Reconstruction Team has been capable to deliver definite services and impart swift influential projects at a phase when Afghan government was not able to meet and execute. One of the international units of USAID, PRTs has occasionally performed similar structures, adversely influencing and destabilization courage in the country, which seems feeble by judging, exclusively in terms of funds. Therefore, President Karzai has constantly asked for PRT assignments government presence services in delivery. The Presidential decree 45, dated 26th July, 2012, has clearly assigned the Independent Directorate of Local Governance (IDLG), in assistance with other ministries, to toil on Provincial Reconstruction Team closure and assignment of activities.

According to Solotaroff, Hasiimi, & Olesen (2009) the good transfer of services and growth of local infrastructure, influence two main locations; sub-national governance and (b) public approaches toward government. It is generally acknowledged that "where the delivery of services is seen as the partial fulfilment of the government's promise to improve services, it had the effect of improving people's opinions of and support for the government". Though, still the local administration in Afghanistan is incapable to give specific elementary services to the masses. It is unproductive, contaminated with corruption and patronage. The main problem at a local level is corruption, followed by unemployment, non-availability of basic services like drinking water, electricity and infrastructure (Asia foundation, 2011). The incapability of local administration to resort to the masses fundamental requirements has a serious implication to the people's trust in the government.

### **3.2 Public Reforms in Afghanistan: Legal Framework for Administrative Reforms**

The foundation for legal administrative reforms is taken from Article 50 of the Constitution. Certainly, the necessity to transform the administrative mechanism was obligatory after the ousting of the Taliban in 2001 and the establishment of a presidential form of government. The presidential ruling that recognized the Independent Administrative Reforms and Civil Services Commission (IARCSC), delivered the legal foundation through which reforms could be conducted within the present system of Afghanistan. According to a high-ranking official from the World Bank (2012) Public administration reforms in the new Afghan government commenced from the beginning and have had accomplishments and catastrophes. There have been restrictions in legal and structural areas. The civil service has come a long way from 2001 till date. The legislative structure was not vibrant in terms of reforms, but a descriptive legal framework is accessible now. The roles and activities of the civil service are vibrant, and a working system has been created.



The IARCSC was formed to perform many reforming activities related to management of civil service and administration. After the execution of the 2004 Constitution and the origin of the administrative mechanisms and the application of the Civil Service Law, there has been more debates on boosting the quality of civil service regulations to additionally support the public administrative system and to make it on par with the public administration standards of the world.

### 3.2 The Constitution

The centralized administrative mechanism in the Afghanistan is based on the subsequent 3 articles of constitution;

**Article 36.** “The administration of the Islamic Republic of Afghanistan, based on the units of the central government and local offices, shall be regulated according to the law. The central administration shall be divided into several administrative units, each headed by a Minister. The local administrative unit shall be a province. The number, area, divisions and related provincial organizations as well as number of offices shall be regulated on the basis of population, social and economic conditions, as well as geographical location.”

**Article 37.** “The government, in preserving the principles of centralism, shall transfer necessary powers, in accordance with the law, to local administrations in order to accelerate and improve economic, social as well as cultural matters, and foster people’s participation in developing national life.”

**Article 50.** “The state shall adopt necessary measures to create a healthy administration and realize reforms in the administrative system of the country. The administration shall perform its duties with complete neutrality and in compliance with the provisions of the laws. The citizens of Afghanistan shall have the right of access to information from state departments in accordance with the provisions of the law. This right shall have no limit except when harming rights of others as well as public security. The citizens of Afghanistan shall be recruited by the state on the basis of ability, without any discrimination, according to the provisions of the law.”

(Government of Afghanistan, 2015).

### 3.3 Local Governance System and Administrative Reforms: An Overview

The prevailing sub-national governance system is neither lucid nor functional. Relatively, sub-national governance in Afghanistan is nowadays consist of a variety of bodies with ill-defined roles and inadequate resources to deliver fundamental services, to encourage development, or ensuring security. The associations between organizations (comprising executive and representative entities like provincial council) at local levels are also blurred, as their associations with the federal government in Kabul.

At the beginning of post 2001, a considerable consideration was given to the federal administration. The newly-formed government of Afghanistan, with the backing of the transnational community, initiated steps to renovate the sub--nationwide governance. The foremost of these paces was the starter of Afghanistan Stabilization Program (ASP) under the Ministry of Interior (MoI). The main objective of ASP was to associate the central with all the provinces, the entire provinces with all districts and the entire districts with all villages across Afghanistan. The MoI, in---charge of local administration, established ASP with an ambitious agenda of infrastructural development, provincial block grants, and administrative reform of



provincial and district governors' offices. Though, ASP became primarily concentrated on structuring physical infrastructure for provincial and district offices. The constituent of administrative reforms was slightly deserted. ASP's key output was few constructions for District Governor's Offices (Government of Afghanistan, 2015).

The presence of government, nevertheless, was not sufficient to retort to the necessities and prospects of masses and for provision of services. Improved organizational, institutional and humanoid capability was mandatory at village, district and provincial in order to deliver fundamental services. Unfortunately, the government was lacking that. When government crew were existed at the district level, work ached from large centralization, little remuneration and lack of administrative procedures. The transnational organizations strived to replenish this gap by offering services to local masses.

To fill this gap in governance, the federal government established two more organizations: Independent Directorate of Local Governance (IDLG) and Independent Administrative Reforms and Civil Services Commission (IARCSC). IDLG and IARCSC have presented numerous reforms policies, programs, laws, regulations, and projects to address the issues in local government. Priority Restructuring and Reform (PRR) program is one of them, which was announced by IARCSC to support more salaries for government crews, Sub--- National Governance Policy of IDLG sanctioned by the cabinet in 2010, institutionalization of District Delivery Program (DDP) by IDLG, and the National Priority Program (NPP) for Local Governance, and the NPP. These programmes concentrated to improve local government and administration in Afghanistan. The prime aim of NPP is to "strengthen and promote leadership, institutional, organizational, administrative and individual capacities for governance at both central and local levels to enable service delivery, economic growth, justice, stabilization and security". These reforms will be applied by a number of departments of Afghan government, but the IARCSC grips the top in execution of NPP.

The formation of numerous semi-representative entities under the Ministry of Rural Rehabilitation and Development (MRRD) programs, like Community Development Councils (CDCs) under the National Solidarity Program (NSP), the District Development Assemblies (DDA), the Afghanistan Social Outreach Program (ASOP) under IDLG as a quasi-representative entity at district level have ominously altered the situation of local governance in Afghanistan.

Generally, such performances have been fruitful in transporting to local communities and new organizations that have the possibility to mend receptiveness and accountability of the government. The local administration is still not capable to deliver dynamic services to societies. Local government is mostly considered incompetent, corrupt and inept.

#### 4. Emerging Challenges

Shurkin (2011) described that the enclosures of a number of international projects and institutions, poses four crucial challenges to the local government of Afghanistan:

- i. Evading the loss of well-being due to transition and withdrawal of international organization particularly PRT and the interrelated development projects;
- ii. Ascertaining the inevitable shrinkage in welfare and cope local, national, and international anticipations and the prospects of recipient disappointment;
- iii. Dealing with growing compression on local administration for superior and effective service provision; and
- iv. Making sure the least physical safety at local level after departure of international



organizations.

As stated previously, these international organizations have been involved for around a decade with official and non-official local governance structures. They have been imparting services and projects in entire sectors. Their role has been gigantic. Similarly, they have unconsciously glorified the expectation of local population. With 2014 imminent and the ruling, forty five of the President dated 26th July, 2012, most of the international organizations including PRT were required to shift their activities to the government of Afghanistan. This transition was a challenge and opportunity for the Afghan government. This is a challenge as there is the concern of cut services, projects and safety for local populaces; an opportunity for the government to spread its influence by imparting additional services straight to the populaces. It is extensively approved that local administration presently suffers the capability to deal with growing demand for service delivery. To meet the demands, it will necessitate the capacity, funds, and fundamental administrative reforms in the entire village, district and provincial level (Review of the Strategic Framework for Afghanistan, 2001).

Public Administration Reforms (PARs) are certainly not simply executed. PAR is challenging in the best of circumstances World Bank, 2008). In Afghanistan, where un-official power associations are sturdier than the official government mechanism and great portions of Afghanistan are unsafe, such reforms is an intimidating challenge indeed. Numerous upright laws and strategies have been set during last some years regarding PAR, but full application is yet to initiate at the local level. As experienced several times in Afghanistan, powerful actors may block reform to ensure that the public sector serves their or their supporters' interests, rather than public good. Abundant potential rents in the form of public money, contracts, jobs, etc. that political and administrative elites can directly control make the public sector particularly vulnerable to rent seeking behaviour". The reforms at public sector reforms are mostly challenging as they are altering the guidelines that regulate the distribution of these rents. To enable government to deliver services to its constituents at local level and to evade the hostile impacts of these challenges, subsequent intrusions and actions are recommended.

#### **4.1 Short Term Policy Recommendations**

At the windup of all transnational institutions across Afghanistan, it is worthy to:

Fully audit all the supporting documents of aids being given by the international organizations to subnational government bodies and local communities in every sector, covering the development projects, operational support, and technical help.

Ascertain the sorts of support that the government must and can reserve and its implication of budget.

Ascertain the properties for transition of these international organizations actions to the local government organizations.

Instil these international organization to complete their on-going projects before windup. As much as possible, the local government entities must be involved in carrying out this task. This cooperation will have two benefits; from one side it will leave a lasting positive impression of international community, and on other hand looking the government officials involved in imparting service will rally local assurance in the government.

Converse initially the dates of windup to Provincial Governor Offices (PGOs) and District Governor Offices (DGOs) and synchronize with IDLG and other related government



stakeholders.

Since the actions of the organizations cut cross various divisions, synchronization among numerous ministries for international organization is a gigantic challenge. A proper synchronization system is essential where each ministry and organization undertake their role and obligations in finishing and posting transition.

Converse the handover of the entire resources to the Afghan government and record all resources in the system of national procurement. Ministry of Finance (MoF) must perform this task in close coordination with the international organization.

In interim-between present and imminent end- shift the focus of international organizations from imparting services to development of the capacity of the officials of the government at district level. The capacity building should be in accordance with NPP 3, Sub-National Governance Policy, and the strategy of IARCSC.

## 4.2 Enabling Local Government

Build offices for DGOs in districts where needed and hence having the presence of government at districts physically.

Evaluate capability in preferred provinces and line up capacity building functions with the transition process. IDLG and IARCSC can initiate the lead in this course and recognize the capacity development needs of provinces undergoing transition. It is crucial, because after transition, government bodies are assumed to impart services to publics.

Carry out a quick overview and appraisal of districts that have seen conversion. This overview will make capable IDLG and IARCSC to recognize the gaps and to plan accordingly.

Detect the sanctioned hierarchy of the organization and replenished the positions at district levels. The excellence of crew, extremely imperative, should be enriched by motivation structures.

Give diminutive term incentives to the employees of the government for service in susceptible and uncertain districts. Due to insecure location and low salaries, government officials remain absent from the job. Such sort of short financial incentives will stimulate the employees to be present for their jobs.

The merit postponement based on the selection of DGs by IARCSC and IDLG. Hiring DGs to respective districts needs an in-depth scrutiny of the condition in that district. For example, a highly qualified individual without sufficient support from the local populaces in a district will be inept even though he is well-versed in his education. Districts must be classified based on certain conditions; instability of situations, possible fears, level of education and so on. Such data will assist the IARCSC and IDLG to hire the suitable individual to the right district.

Present a trial performance for an assessment system, end with punishment and reward. This practice must grow several times and be staged from the performance for an evaluation method.

Creating a “model province” and “model district.” Such model must be deployed as a standard for stage out.



Reforms and escalation of the capability of the justice can be measured at the sub-national level. Due to the ineffective delivery of justice system, individuals mostly move to the fierce but rapid and relatively reliable system of justice delivery utilized by anti-government rudiments.

Implement it in the short period though, this oversight must be founded on doctrines and not on personal interests, certainly an enormously tough job in the present socio-political environment.

### **4.3 Long Term Policy Recommendations**

The long term policy recommendations include:

A sub national government law, sanctioned by the cabinet and presented in parliament, will help explain the role of these different organizations.

Introduce reforms related to legal and policy, revising the existing laws in regard to PAR and civil services. These alterations will significantly donate to institutionalization of mammoth government and administration.

Decentralize budgeting and planning at the provincial level to permit provincial administrations undertaken development decisions in accordance with local prerequisites. Presently, an overly centralized budget process deters application of Provincial Development Committees (PDCs) plans. MoF must carry a testing program for transporting provincial budgeting according to provincial plans. PDCs can perform a significant role in this regard.

Enhance the coordination amongst donor, PGOs and DGOs to make off budget expenses of donors in accordance with provincial and district plans. If conducted with the "Afghan first" style, this coordination will extremely rise the integrity of local government.

Strengthen the performance basis budget tactic at national and subnational level. According to this method, a line ministry or a provincial or district body of a line ministry will be essential to demonstrate accomplishments as cash disbursed.

Expand the development rate budget implementation. This rate, particularly in the development budget, is presently a main delinquent district provincial and central level.

Evading a one scope fit all resolution. Focus must be moved from reforms contents towards a broader concern that includes reform context and process.

Involve local stakeholders in PAR and hence, increase their proprietorship of the reforms agenda.

Launch independent lapse systems to make sure better performance by local administration. This could be independent regulators or quasi characteristic bodies.



## 5. Contribution of the Study and Future Recommendations

This is the first study in Afghanistan, highlighting the administrative reforms at local level as studies have been conducted in other developed and other developing nations. In future, studies may be conducted regarding the aggregate reforms in general as well the reforms made in each public sector.

## 6. Conclusion

The serious condition in Afghanistan averts the government from initiating reforms and transformation, as security emasculates the reforms primacies. However, greater than a decade of consecutive main administrative reforms programs at national and sub-national level, the transformations have been initiated by the different governmental and international donors (WorldBank, 2008).

The public sector as the perceptible and performing gizmo of the government, has to contribute towards the expansions of the excellent and trustworthiness of services to nations and business organization. Services like actions to alleviate poverty, fight corruption, develop standard of living, and boost private sector growth are decisive for the development of the nation itself. So, the whole government at central, provincial and district level must emphasis on CSR. A whole-of-government, logical, and viable policy structure and program are compulsory in this regard. Generally, a vibrant roadmap is desirable, as it is an indomitable strategy in terms of prioritizing the concerns to be documented and the resolutions to be executed constantly and steadily (Kabul Process, 2012).

The basic needs to accomplish this is an inclusive empathetic of CSR. Most significant are the extraordinary incentive, indisputable will, and obligation of the government, from the President down to the management and government servant. This necessitates the assiduous recruitment of capable and capable individual at each place and level. Besides, this it is necessary to have proper legal framework, structural and management concerns, capacity building and training, salaries and scaling mechanism, selection process, accountability and independent administrative reform and civil service commission. This study highlights the reforms made by IARCSC and IDLG. They have presented numerous reform policies, programs, laws, regulations, and projects to address the issues in local since its inception. PRR program are one of them which was announced by IARCSC to support more salaries for government crew, Sub National Governance Policy of IDLG sanctioned by the cabinet in 2010, introduction of DDP by IDLG, and the NPP for Local Governance, and the NPP.

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## Appendix: I

### Applicable regulatory documents in the civil service sector

Local name	Type of law	Function of the law
Qanoon	Law	Legislative document enforced by the President after the legislative process and parliamentary approval
Furmaan	Decree	Legislative document issued by the President
Tarzul-amal	Procedure	Regulatory document issued by individual ministries to manage their own specific process or function
Musaweda		Legal draft provided by the government
Hukum		Administrative order
Furmaan-e-Taqnini	Legislative decree	Legislative decrees are first approved by the President and Cabinet. The President has the sole authority to approve administrative decrees.  The National Assembly then ratifies, modifies, or abrogates the laws and legislative decrees.
Muqarrara	Regulation	Regulations are adopted by the Cabinet, while different legislative documents such as rules, directives, and guidelines are passed by the individual ministers.



## **Analysis of Public Administrative Reforms: A Case of Afghanistan**

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During the early post-Taliban ages, ample consideration was given to rapid influence projects at sub-national level to recover structure for the delivery of fundamental services. This attempt was conducted largely by the donor agency via PRTs and other international NGOs. The ultimate mission of reforming and construction local administration was believed to be less significant to short term objectives of influential projects. In most of the projects, attention to participation and strengthening governance structures in the delivery of projects and services has been the exception rather than the rule, since both donors and government were striving to demonstrate a quick impact in a very difficult environment (Asia Foundation's Assessment, 2007)

However on one way, one of the US unit, the Provincial Reconstruction Team has been capable to deliver definite services and impart swift influential projects at a phase when Afghan government was not able to meet and execute. One of the international units of USAID, PRTs has occasionally performed similar structures, adversely influencing and destabilization courage in the country, which seems feeble by judging, exclusively in terms of funds. Therefore, President Karzai has constantly asked for PRT assignments government presence services in delivery. The Presidential decree 45, dated 26th July, 2012, has clearly assigned the Independent Directorate of Local Governance (IDLG), in assistance with other ministries, to toil on Provincial Reconstruction Team closure and assignment of activities.

According to Solotaroff, Hasiimi, & Olesen (2009) the good transfer of services and growth of local infrastructure, influence two main locations; sub---national governance and (b) public approaches toward government. It is generally acknowledged that "where the delivery of services is seen as the partial fulfilment of the government's promise to improve services, it had the effect of improving people's opinions of and support for the government". Though, still the local administration in Afghanistan is incapable to give specific elementary services to the masses. It is unproductive, contaminated with corruption and patronage. The main problem at a local level is corruption, followed by unemployment, non-availability of basic services like drinking water, electricity and infrastructure (Asia foundation, 2011). The incapability of local administration to resort to the masses fundamental requirements has a serious implication to the people's trust in the government.

### **3.2 Public Reforms in Afghanistan: Legal Framework for Administrative Reforms**

The foundation for legal administrative reforms is taken from Article 50 of the Constitution. Certainly, the necessity to transform the administrative mechanism was obligatory after the ousting of the Taliban in 2001 and the establishment of a presidential form of government. The presidential ruling that recognized the Independent Administrative Reforms and Civil Services Commission (IARCSC), delivered the legal foundation through which reforms could be conducted within the present system of Afghanistan. According to a high-ranking official from the World Bank (2012) Public administration reforms in the new Afghan government commenced from the beginning and have had accomplishments and catastrophes. There have been restrictions in legal and structural areas. The civil service has come a long way from 2001 till date. The legislative structure was not vibrant in terms of reforms, but a descriptive legal framework is accessible now. The roles and activities of the civil service are vibrant, and a working system has been created.



The IARCSC was formed to perform many reforming activities related to management of civil service and administration. After the execution of the 2004 Constitution and the origin of the administrative mechanisms and the application of the Civil Service Law, there has been more debates on boosting the quality of civil service regulations to additionally support the public administrative system and to make it on par with the public administration standards of the world.

### **3.2 The Constitution**

The centralized administrative mechanism in the Afghanistan is based on the subsequent 3 articles of constitution;

**Article 36.** “The administration of the Islamic Republic of Afghanistan, based on the units of the central government and local offices, shall be regulated according to the law. The central administration shall be divided into several administrative units, each headed by a Minister. The local administrative unit shall be a province. The number, area, divisions and related provincial organizations as well as number of offices shall be regulated on the basis of population, social and economic conditions, as well as geographical location.”

**Article 37.** “The government, in preserving the principles of centralism, shall transfer necessary powers, in accordance with the law, to local administrations in order to accelerate and improve economic, social as well as cultural matters, and foster people’s participation in developing national life.”

**Article 50.** “The state shall adopt necessary measures to create a healthy administration and realize reforms in the administrative system of the country. The administration shall perform its duties with complete neutrality and in compliance with the provisions of the laws. The citizens of Afghanistan shall have the right of access to information from state departments in accordance with the provisions of the law. This right shall have no limit except when harming rights of others as well as public security. The citizens of Afghanistan shall be recruited by the state on the basis of ability, without any discrimination, according to the provisions of the law.”

(Government of Afghanistan, 2015).

### **3.3 Local Governance System and Administrative Reforms: An Overview**

The prevailing sub-national governance system is neither lucid nor functional. Relatively, sub-national governance in Afghanistan is nowadays consist of a variety of bodies with ill-defined roles and inadequate resources to deliver fundamental services, to encourage development, or ensuring security. The associations between organizations (comprising executive and representative entities like provincial council) at local levels are also blurred, as their associations with the federal government in Kabul.

At the beginning of post 2001, a considerable consideration was given to the federal administration. The newly-formed government of Afghanistan, with the backing of the transnational community, initiated steps to renovate the sub--nationwide governance. The foremost of these paces was the starter of Afghanistan Stabilization Program (ASP) under the Ministry of Interior (MoI). The main objective of ASP was to associate the central with all the provinces, the entire provinces with all districts and the entire districts with all villages across Afghanistan. The MoI, in---charge of local administration, established ASP with an ambitious agenda of infrastructural development, provincial block grants, and administrative reform of



provincial and district governors' offices. Though, ASP became primarily concentrated on structuring physical infrastructure for provincial and district offices. The constituent of administrative reforms was slightly deserted. ASP's key output was few constructions for District Governor's Offices (Government of Afghanistan, 2015).

The presence of government, nevertheless, was not sufficient to retort to the necessities and prospects of masses and for provision of services. Improved organizational, institutional and humanoid capability was mandatory at village, district and provincial in order to deliver fundamental services. Unfortunately, the government was lacking that. When government crew were existed at the district level, work ached from large centralization, little remuneration and lack of administrative procedures. The transnational organizations strived to replenish this gap by offering services to local masses.

To fill this gap in governance, the federal government established two more organizations: Independent Directorate of Local Governance (IDLG) and Independent Administrative Reforms and Civil Services Commission (IARCSC). IDLG and IARCSC have presented numerous reforms policies, programs, laws, regulations, and projects to address the issues in local government. Priority Restructuring and Reform (PRR) program is one of them, which was announced by IARCSC to support more salaries for government crews, Sub--- National Governance Policy of IDLG sanctioned by the cabinet in 2010, institutionalization of District Delivery Program (DDP) by IDLG, and the National Priority Program (NPP) for Local Governance, and the NPP. These programmes concentrated to improve local government and administration in Afghanistan. The prime aim of NPP is to "strengthen and promote leadership, institutional, organizational, administrative and individual capacities for governance at both central and local levels to enable service delivery, economic growth, justice, stabilization and security". These reforms will be applied by a number of departments of Afghan government, but the IARCSC grips the top in execution of NPP.

The formation of numerous semi-representative entities under the Ministry of Rural Rehabilitation and Development (MRRD) programs, like Community Development Councils (CDCs) under the National Solidarity Program (NSP), the District Development Assemblies (DDA), the Afghanistan Social Outreach Program (ASOP) under IDLG as a quasi-representative entity at district level have ominously altered the situation of local governance in Afghanistan.

Generally, such performances have been fruitful in transporting to local communities and new organizations that have the possibility to mend receptiveness and accountability of the government. The local administration is still not capable to deliver dynamic services to societies. Local government is mostly considered incompetent, corrupt and inept.

#### 4. Emerging Challenges

Shurkin (2011) described that the enclosures of a number of international projects and institutions, poses four crucial challenges to the local government of Afghanistan:

- i. Evading the loss of well-being due to transition and withdrawal of international organization particularly PRT and the interrelated development projects;
- ii. Ascertaining the inevitable shrinkage in welfare and cope local, national, and international anticipations and the prospects of recipient disappointment;
- iii. Dealing with growing compression on local administration for superior and effective service provision; and
- iv. Making sure the least physical safety at local level after departure of international



organizations.

As stated previously, these international organizations have been involved for around a decade with official and non-official local governance structures. They have been imparting services and projects in entire sectors. Their role has been gigantic. Similarly, they have unconsciously glorified the expectation of local population. With 2014 imminent and the ruling, forty five of the President dated 26th July, 2012, most of the international organizations including PRT were required to shift their activities to the government of Afghanistan. This transition was a challenge and opportunity for the Afghan government. This is a challenge as there is the concern of cut services, projects and safety for local populaces; an opportunity for the government to spread its influence by imparting additional services straight to the populaces. It is extensively approved that local administration presently suffers the capability to deal with growing demand for service delivery. To meet the demands, it will necessitate the capacity, funds, and fundamental administrative reforms in the entire village, district and provincial level (Review of the Strategic Framework for Afghanistan, 2001).

Public Administration Reforms (PARs) are certainly not simply executed. PAR is challenging in the best of circumstances World Bank, 2008). In Afghanistan, where un-official power associations are sturdier than the official government mechanism and great portions of Afghanistan are unsafe, such reforms is an intimidating challenge indeed. Numerous upright laws and strategies have been set during last some years regarding PAR, but full application is yet to initiate at the local level. As experienced several times in Afghanistan, powerful actors may block reform to ensure that the public sector serves their or their supporters' interests, rather than public good. Abundant potential rents in the form of public money, contracts, jobs, etc. that political and administrative elites can directly control make the public sector particularly vulnerable to rent seeking behaviour". The reforms at public sector reforms are mostly challenging as they are altering the guidelines that regulate the distribution of these rents. To enable government to deliver services to its constituents at local level and to evade the hostile impacts of these challenges, subsequent intrusions and actions are recommended.

#### **4.1 Short Term Policy Recommendations**

At the windup of all transnational institutions across Afghanistan, it is worthy to:

Fully audit all the supporting documents of aids being given by the international organizations to subnational government bodies and local communities in every sector, covering the development projects, operational support, and technical help.

Ascertain the sorts of support that the government must and can reserve and its implication of budget.

Ascertain the properties for transition of these international organizations actions to the local government organizations.

Instil these international organization to complete their on-going projects before windup. As much as possible, the local government entities must be involved in carrying out this task. This cooperation will have two benefits; from one side it will leave a lasting positive impression of international community, and on other hand looking the government officials involved in imparting service will rally local assurance in the government.

Converse initially the dates of windup to Provincial Governor Offices (PGOs) and District Governor Offices (DGOs) and synchronize with IDLG and other related government



stakeholders.

Since the actions of the organizations cut cross various divisions, synchronization among numerous ministries for international organization is a gigantic challenge. A proper synchronization system is essential where each ministry and organization undertake their role and obligations in finishing and posting transition.

Converse the handover of the entire resources to the Afghan government and record all resources in the system of national procurement. Ministry of Finance (MoF) must perform this task in close coordination with the international organization.

In interim-between present and imminent end- shift the focus of international organizations from imparting services to development of the capacity of the officials of the government at district level. The capacity building should be in accordance with NPP 3, Sub-National Governance Policy, and the strategy of IARCSC.

## 4.2 Enabling Local Government

Build offices for DGOs in districts where needed and hence having the presence of government at districts physically.

Evaluate capability in preferred provinces and line up capacity building functions with the transition process. IDLG and IARCSC can initiate the lead in this course and recognize the capacity development needs of provinces undergoing transition. It is crucial, because after transition, government bodies are assumed to impart services to publics.

Carry out a quick overview and appraisal of districts that have seen conversion. This overview will make capable IDLG and IARCSC to recognize the gaps and to plan accordingly.

Detect the sanctioned hierarchy of the organization and replenished the positions at district levels. The excellence of crew, extremely imperative, should be enriched by motivation structures.

Give diminutive term incentives to the employees of the government for service in susceptible and uncertain districts. Due to insecure location and low salaries, government officials remain absent from the job. Such sort of short financial incentives will stimulate the employees to be present for their jobs.

The merit postponement based on the selection of DGs by IARCSC and IDLG. Hiring DGs to respective districts needs an in-depth scrutiny of the condition in that district. For example, a highly qualified individual without sufficient support from the local populaces in a district will be inept even though he is well-versed in his education. Districts must be classified based on certain conditions; instability of situations, possible fears, level of education and so on. Such data will assist the IARCSC and IDLG to hire the suitable individual to the right district.

Present a trial performance for an assessment system, end with punishment and reward. This practice must grow several times and be staged from the performance for an evaluation method.

Creating a “model province” and “model district.” Such model must be deployed as a standard for stage out.



Reforms and escalation of the capability of the justice can be measured at the sub-national level. Due to the ineffective delivery of justice system, individuals mostly move to the fierce but rapid and relatively reliable system of justice delivery utilized by anti-government rudiments.

Implement it in the short period though, this oversight must be founded on doctrines and not on personal interests, certainly an enormously tough job in the present socio-political environment.

### **4.3 Long Term Policy Recommendations**

The long term policy recommendations include:

A sub national government law, sanctioned by the cabinet and presented in parliament, will help explain the role of these different organizations.

Introduce reforms related to legal and policy, revising the existing laws in regard to PAR and civil services. These alterations will significantly donate to institutionalization of mammoth government and administration.

Decentralize budgeting and planning at the provincial level to permit provincial administrations undertaken development decisions in accordance with local prerequisites. Presently, an overly centralized budget process deters application of Provincial Development Committees (PDCs) plans. MoF must carry a testing program for transporting provincial budgeting according to provincial plans. PDCs can perform a significant role in this regard.

Enhance the coordination amongst donor, PGOs and DGOs to make off budget expenses of donors in accordance with provincial and district plans. If conducted with the "Afghan first" style, this coordination will extremely rise the integrity of local government.

Strengthen the performance basis budget tactic at national and subnational level. According to this method, a line ministry or a provincial or district body of a line ministry will be essential to demonstrate accomplishments as cash disbursed.

Expand the development rate budget implementation. This rate, particularly in the development budget, is presently a main delinquent district provincial and central level.

Evading a one scope fit all resolution. Focus must be moved from reforms contents towards a broader concern that includes reform context and process.

Involve local stakeholders in PAR and hence, increase their proprietorship of the reforms agenda.

Launch independent lapse systems to make sure better performance by local administration. This could be independent regulators or quasi characteristic bodies.



## 5. Contribution of the Study and Future Recommendations

This is the first study in Afghanistan, highlighting the administrative reforms at local level as studies have been conducted in other developed and other developing nations. In future, studies may be conducted regarding the aggregate reforms in general as well the reforms made in each public sector.

## 6. Conclusion

The serious condition in Afghanistan averts the government from initiating reforms and transformation, as security emasculates the reforms primacies. However, greater than a decade of consecutive main administrative reforms programs at national and sub-national level, the transformations have been initiated by the different governmental and international donors (WorldBank, 2008).

The public sector as the perceptible and performing gizmo of the government, has to contribute towards the expansions of the excellent and trustworthiness of services to nations and business organization. Services like actions to alleviate poverty, fight corruption, develop standard of living, and boost private sector growth are decisive for the development of the nation itself. So, the whole government at central, provincial and district level must emphasis on CSR. A whole-of-government, logical, and viable policy structure and program are compulsory in this regard. Generally, a vibrant roadmap is desirable, as it is an indomitable strategy in terms of prioritizing the concerns to be documented and the resolutions to be executed constantly and steadily (Kabul Process, 2012).

The basic needs to accomplish this is an inclusive empathetic of CSR. Most significant are the extraordinary incentive, indisputable will, and obligation of the government, from the President down to the management and government servant. This necessitates the assiduous recruitment of capable and capable individual at each place and level. Besides, this it is necessary to have proper legal framework, structural and management concerns, capacity building and training, salaries and scaling mechanism, selection process, accountability and independent administrative reform and civil service commission. This study highlights the reforms made by IARCSC and IDLG. They have presented numerous reform policies, programs, laws, regulations, and projects to address the issues in local since its inception. PRR program are one of them which was announced by IARCSC to support more salaries for government crew, Sub National Governance Policy of IDLG sanctioned by the cabinet in 2010, introduction of DDP by IDLG, and the NPP for Local Governance, and the NPP.

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## Appendix: I

### Applicable regulatory documents in the civil service sector

Local name	Type of law	Function of the law
Qanoon	Law	Legislative document enforced by the President after the legislative process and parliamentary approval
Furmaan	Decree	Legislative document issued by the President
Tarzul-amal	Procedure	Regulatory document issued by individual ministries to manage their own specific process or function
Musaweda		Legal draft provided by the government
Hukum		Administrative order
Furmaan-e-Taqnini	Legislative decree	Legislative decrees are first approved by the President and Cabinet. The President has the sole authority to approve administrative decrees.  The National Assembly then ratifies, modifies, or abrogates the laws and legislative decrees.
Muqarrara	Regulation	Regulations are adopted by the Cabinet, while different legislative documents such as rules, directives, and guidelines are passed by the individual ministers.



## **Market Orientation and Brand Performance in Small and Medium Enterprises (SMES) in Malaysia Context**

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### **ABSTRACT**

The focus of this study is to examine the impact of market orientation on brand performance of the Small Medium Enterprises (SMEs) in Malaysia context. Market orientation is identified as antecedent and critical for brand management success. This study is set as a cross sectional and quantitative study with sample size comprises 304 Malaysian SMEs from the food and beverage (F & B) manufacturing sector based on the list of Federation of Malaysian Manufacturers (FMM) directory 2012. Smart Partial Least Squared (PLS) version 2.0 software, a structural equation modelling technique was used to analyse data. Results of this study found that market orientation will not have a positive impact on brand performance of Malaysia's SME despite several supporting empirical evidences on the direct relationship between market orientation and brand performance. This study enhances understanding on the brand management practices among Malaysian SMEs and may assist to formulate government support programs towards strengthening the brand-related knowledge and skills among the SMEs.

**Keywords:** Market Orientation, Brand Performance, Malaysia, Small Medium Enterprises

### **1. Introduction**

Small and medium enterprises (SMEs) are critical for the growth of Malaysia as they are driving Gross Domestic Product (GDP) by contributing as much as 37% (SME Corp, 2019). Nonetheless, majorities of Malaysian SMEs were hesitant to apply brand management as they do not perceive branding as their utmost strategy to compete globally despite their awareness on the importance of brands (Musa & Chinniah, 2016; Mohd and Char, 2010). Many researchers have mentioned that the poor performance of Malaysian SMEs in business was due to lacking management skills; mainly the skills and capabilities needed in brand management and comprehensive brand plan for brand communications (Che Omar & Anas, 2014; Lim Kok Wing, 2009). Recent findings also implied that SMEs marketing is less efficient, informal and disorganized based on the way the owners/managers perform business and hardly practice brand management in their daily activities (Abdullah, Ahmad, Rus & Zainudin, 2015). In fact, poor performance in SMEs is found to be due to lack of emphasizing on brand management practices resulting SMEs do not have strong brand (Hashim, Tajuddin and Zainol, 2015).

Brand management is in fact an area of increasing importance to marketers today, particularly as firms struggle to communicate the ever complex and intangible messages as part of brand management strategies (Dumitriu, Militaru, Deselnice, Niculescu & Popescu,



2019). Owning a strong brand permits SMEs companies to differentiate their products or services from the competitors, build customer loyalty and confidence, demand a premium price over the competitors, employ as well as greater control over brand promotion and distribution; all while impacting the business valuation. Higher brand loyalty and good image building is proven to be the foundation for better brand performance that provides high ROI. For that reason, managers should focus on brand building activities and market sensing and should realize that companies can achieve market-driven competitive advantage by having brands as strategically important assets. Ahmad & Iqbal (2013) highlighted that market orientation can enhance brand performance in the sense that market-oriented firms have stronger brands than those companies which are not oriented towards markets. Hence, the main aim of proposed research is to investigate the impact of market orientation to brand performance in Malaysia SMEs context.

### **1.1 Objective of Study**

The objective of this study is to investigate the impact of market orientation on brand performance in Malaysia SMEs' context.

## **2. Literature Review and Hypothesis Development**

### **2.1 Brand Performance**

As highlighted by O'Cass and Ngo (2007) brand performance signifies a brand's strength in the market. At the same time, Tuan (2012) suggests brand performance is reflected in its organizational strategy and goals' achievement and can be measured through its sales growth, profitability and market share. Simon and Sullivan (1993) have also operationalized brand performance using stock market returns. However, subjective measures have shown to yield results consistent with performance objective measures (Dess, Lumpkin, and Covin 1997; Dess and Robinson 1984) and reliable in measuring an organization's performance (Mintzberg 1996; Pearce, Robbins, and Robinson 1987).

Besides that, usage of subjective measures may also be an effective way to overcome difficulties related with obtaining competitively sensitive information (Caruana, Ramaseshan, and Ewing 1998). Likewise, Sapienza, Smith, and Gannon (1988) believe that measuring an organization's performance using objective financial data can be difficult as the data may either be hard to validate with external sources, unreliable or unavailable.

On the other hand, according to Wong and Merrilees (2008), brand performance relates to brand success in the market and it measures the brand's strategic achievements. Therefore, Wong and Merrilees opine that for this construct, economic measures are inappropriate. As suggested by past researchers (Chaudhuri, 2002; Reid, 2002; Wong & Merrilees, 2007), brand reputation, brand awareness and brand loyalty are important performance variables of a brand.

Therefore, in this study, brand performance follows the definition of Wong and Merrilees (2008) in describing a successful brand in the market. It is measured by subjective measures



such as firm's desired image in market, firm's reputation, customer brand loyalty, brand awareness and brand marketing.

## 2.2. Market Orientation

Market orientation relates to a basis for decision making (Shapiro, 1988), a set of specific activities and behaviors (Kohli et al., 1990), a resource (Hunt and Morgan 1995), or an aspect of brand culture (Deshpande Farley & Webster, 1993; Slater & Narver, 2004). Market orientation signifies the firm's effort to response to competitors' actions, enhance customers' needs and inter-functional coordination (Narver & Slater 1990; Kohli & Jaworski, 1990).

Based on behavioral theory of Narver et al., (1990), market orientation comprises of three behavioral components: competitor orientation inter-functional coordination and customer orientation, as well as two decision criteria including profit objective and long-term focus. Competitor orientation and customer orientation comprise of all activities related in obtaining buyers' and competitors' information in the target market and distributing it throughout the businesses. By bearing customers' needs in mind, it allows firm to provide superior value and higher levels of customers' satisfaction. At the same time, to focus on competitors and frequently deliberating competitor strengths and weaknesses permits reaction to competitive threats. The integration of all firm members in fulfilling customer needs is inter-functional coordination and is grounded on the competitor information and customer and comprises the business's matched efforts. According to Raju, Lonial and Crum (2011) despite the small size and newness liabilities, SMEs are usually known to compete effectively with larger firms and highly market oriented. This makes it valuable to acquire a better understanding of market orientation in the SMEs environment.

Recent findings demonstrate that market orientation has a statistically significant and positive impact on SME firm's performance in emerging economies (Asheq & Hossain, 2019; Gruber-Muecke & Hofer; 2015). They further elaborate that SME firm performance is driven by the firm's ability to satisfy customer's need and pursue the untapped opportunity. Slater and Narver (1995) emphasized that market orientation is valuable as it focuses organizations on regular data collection concerning the target customers' needs and competitors' capabilities and to apply this information in the effort to produce superior and permanent values for customers. Deshpande et al., (1993) consider market orientation as a brand culture which indicates creation of essential behavior for establishing superior values for customer effectively and efficiently hence brings a more consistent and better performance for the firm. This is further supported by Lee et al., (2008) who found that market orientation plays an important role in brand management in business to business (B-B) environments. In addition, Lee et al., (2008) also found that market orientation has an impact on customer's performance only through brand management. This suggests that market orientation could be a critical resource for brand management.

In the literature, two different measurement methods of market orientation are found, one by Kohli et al., (1990), Jaworski and Kohli (1993) and the other by Narver et al., (1990) and Slater et al., (1994, 1995), although both methods share some mutual characteristics. Kohli and Jaworski (1990) view market orientation as market intelligence and introduced three elements of a market orientation, which are intelligence generation, dissemination, and responsiveness. For this study, Narver and Slater's method is more appropriate, since Narver et al., (1990) and Slater et al., (1994, 1995) define market orientation concept from a perspective of organization culture implying that market orientation should incorporate inter-functional coordination within a firm. Specifically, market orientation is defined "as the



organization culture that most effectively and efficiently creates the necessary behaviors for the creation of superior value for buyers and, thus, continuous superior performance for the business” (Narver and Slater, 1990).

### 2.3. Relationship between Market Orientation and Brand Performance

Though some cautionary concerns have arisen concerning market orientation's direct contribution to firm performance in the presence of a mediator such as organizational learning and innovation and suggest direct relationship of market orientation and performance. Some scholars who founded supports for direct contribution of market orientation in the health care industry are (Kumar, Subramanian & Yauger, 1998), in New Zealand and Australian universities (Caruana, Ramaseshan and Ewing (1998), in UK service firms (Pitt, Caruana & Berthon, 1996) and in retail stock-broking firms in Taiwan (Chang and Chen (1998). Thus, it is hypothesized that:

Hypotheses: Market Orientation has a Positive Effect on Brand Performance

There are two different measurement methods of market orientation, one by Kohli et al. (1990), Jaworski and Kohli (1993) and the other by Narver et al., (1990) and Slater and Narver (1994, 1995), although both approaches share some common characteristics. In this research, Narver and Slater's method is adopted. Narver and Slater's method is more appropriate for this study data source, since Narver et al., (1990) and Slater et al., (1994, 1995) define a concept of market orientation from a perspective of organization culture implying that market orientation should incorporate inter-functional coordination within a firm. Narver and Slater's scales were modified by Lee et al., (2008). In this study, five-point Likert-scale items used for three major components: customer orientation, competitor orientation, and inter-functional coordination. Each component has three items.

**Table 2.1: Measurement Scale for Market Orientation**

	Original Statement in Source of Study	Modified Statement for Present Study	Sources / Cronbach Alpha in source study
1.	Continuous understanding of customer needs	We have continuous understanding of customer needs	Narver, J.C. and Slater, S.F. (1990); Slater, S. F., and Narver, J. C. (1994, 1995); Lee, Park, Baek and Lee (2008)  0.89
2.	Customer value objectives	Our main objective is to create value for our customer	
3.	Customer based strategies	Our strategies are customer based	
4.	Acquisition of competitor information	We have acquisition of competitor information	
5.	Quick response to competitors' actions	We respond rapidly to competitors' actions	
6.	Top manager's interest in	We regularly have inter-organizational	



	competitors' strategies	meetings to discuss competitors' strategies	
7.	Coordination based on customer needs	There is coordination in our firm based on customer needs	
8.	Coordination on customer value creation	There is coordination on customer value creation in our firm	
9.	Managements' interests in inter-functional activities	The management has interests in firm's inter-functional activities	

### 3.0 Research Methodology

A quantitative research method was applied using a questionnaire to fulfil the aim which is to investigate the effect of market orientation to brand performance in Malaysia SMEs context. The unit of analysis in this study is the individual SMEs in the food and beverage (F&B) industry based on the list of Federation of Malaysian Manufacturers (FMM) directory 2012 which covers West Malaysia, Sabah and Sarawak. The respondents comprised brand manager/marketing manager/senior marketing executives who represent the SMEs firms and used as key informants in assessing all the constructs described above due to their specific knowledge about the phenomena being studied, an approach applied in numerous studies (e.g., Gatignon and Xuereb, 1997; Moorman and Miner, 1995).

The primary data was undertaken by gathering information directly from respondents out of questionnaire that is designed to collect primary data from customers. This is carried out for the purpose of explaining the relationship between variables shown in research framework. Self-administered questionnaires were distributed to the brand/marketing managers/senior marketing executives of SME firms in the food and beverage (F & B) industry based on the list of Federation of Malaysian Manufacturers (FMM) directory 2012 via site visit to the entrepreneurs and SME fairs, mainly in Kuala Lumpur, Shah Alam, Kota Kinabalu and Kuching. In order to achieve zero repetition of respondents.

From the total of 240 questionnaires distributed, only 176 questionnaires were returned. Out of those 176 responses, 13 returned questionnaires were incomplete and considered invalid. Hence, only 163 questionnaires or 54 percent of the total population were valid and usable for data analysis. An overall review of literature was carried out to identify the literature gaps. In addition, databases, books, conference papers, journal articles, thesis and working papers from both national and international researches were utilized to ensure the quality of the study. Questionnaire items were adapted from several studies of previous literature with pre-tested, reliable and valid scales. These scales were modified to suit this study. The questionnaire consists of two parts. The first part includes the company's profile such as: product category, company's status, number of employees, years in operations, average sales annual turnover, market level and average market share. Market orientation was measured using Narver et al., (1990) and Slater et al., (1994, 1995) who defined market orientation concept from a perspective of organization culture implying that market orientation should incorporate inter-functional coordination within a firm. Narver and Slater's scales were modified by Lee et al., (2008). In this study, five-point Likert-scale items used for



three major components: customer orientation, competitor orientation, and inter-functional coordination. Each component has three items. A pilot test was conducted among F&B SMEs in Kota Kinabalu, Sabah after the initial questionnaire development. The final version of the instruments was obtained through the pre-test designed to enhance construct reliability and validity through consultation by experts in the field.

#### 4. Analyses and Results

The measurement models are assessed for adequate validity and unidimensional before commencing to structural model effects and interaction modelling to test the research hypotheses. Data analysis was performed using Partial Least Squared (PLS), a structural equation modelling technique that uses a component-based approach.

Before assessing the convergent and discriminant validity, the respective loadings and cross loadings of the factors are assessed if there is any problem with any items. The cut of value of 0.5 is used as suggested by Hair et al. (2010), whereby values greater than 0.5 are generally considered for practical significance. It can be observed that all the items measuring a construct loaded highly on that construct and loaded lower on the other construct thus confirming constructs validity as shown in Table 4.1:

**Table 4.1: Discriminant Validity-Cross Loadings**

	<b>BRAND PERFORMANCE</b>	<b>MARKET ORIENTATION</b>
BP1	<b>0.855</b>	
BP2	<b>0.851</b>	
BP3	<b>0.819</b>	
BP4	<b>0.860</b>	
BP5	<b>0.830</b>	
MO1		<b>0.648</b>
MO2		<b>0.525</b>
MO3		<b>0.682</b>
MO4		<b>0.666</b>
MO5		<b>0.816</b>
MO6		<b>0.747</b>
MO7		<b>0.816</b>
MO8		<b>0.762</b>
MO9		<b>0.816</b>

The AVE for this study is in the range of 0.527 and 0.711. Composite Reliability which indicates the degree to which the latent variables can be explained by the observed variables is in the range of 0.908 to 0.925, which exceeds the cut off value of 0.6. Thus, this study ensured the existence of convergent validity. Table 4.2 summarizes the results of the measurement model which shows that the constructs are all valid measures of their respective constructs.



**Table 4.2: Results of Measurement Model (Internal Consistency Reliability and Convergent Validity)**

Construct	Items	Loading	AVE <sup>a</sup>	CR	Cronbach's Alpha (a)
Brand Performance	BP1	0.855	0.711	0.925	0.898
	BP2	0.851			
	BP3	0.819			
	BP4	0.860			
	BP5	0.830			
Market Orientation	MO1	0.648	0.527	0.908	0.888
	MO2	0.525			
	MO3	0.682			
	MO4	0.666			
	MO5	0.816			
	MO6	0.747			
	MO7	0.816			
	MO8	0.762			
	MO9	0.816			

In order to address discriminant validity, the square root of the AVE is compared against the correlations of the other constructs (Fornell and Larcker, 1981). As shown in Table 4.3, the calculated square root of the AVE exceeds the intercorrelations of the construct with the other constructs in the model which ensures adequate discriminant validity. In total, the measurement model of the study demonstrated adequate convergent and discriminant validity. As can be seen in Table 4.4, all the composite reliability values ranging from 0.648 to 0.855 exceeds the cut off value of 0.6 (Bagozzi and Yi, 1988). As such, based on the composite reliability, we can conclude that the measurement is reliable.

**Table 4.3: Discriminant Validity – Fornell Larker Criterion**

	Brand Performance	Market Orientation
Brand Performance	0.843	
Market Orientation		0.726



**Table 4.4 Result of Reliability Test**

Constructs	Measurement Item	Composite Reliability	Loading Range	*Number of Items
MARKET ORIENTATION	MO1, MO2, MO3, MO4, MO5, MO6, MO7, MO8, MO9	0.908	0.648-0.816	9(9)
BRAND PERFORMANCE	BP1, BP2, BP3, BP4, BP5	0.925	0.830-0.855	5(5)

\* Final item numbers (initial numbers)

After computing the path estimates in the structural model, a bootstrap analysis was performed to assess the statistical significance of the path coefficients. From the initial set of paths, market orientation is found to have no significant effect on brand performance as shown in Table 4.5.

**Table 4.5: Significance Testing Results of the Structural Model Path Coefficients (Direct Effect)**

H	Path	Beta	Standard Error (SE)	T-value	Decision
H	Market Orientation-> Brand Performance	-0.067	0.092	0.728	Not Supported

\*\*\* p < 0.01 (2.58), \*\* p < 0.05 (1.96), \* p < 0.1 (1.65) (based on two-tailed test)

## 5. Conclusion and Implications

The result of this study found that market orientation will not have a significant effect on brand performance in the context of Malaysia SMEs. This finding complements prior research studies which have similar results (Greenley, 1995; Han et al., 1998; Caruana et al., 1998; Sargeant and Mohammad, 1999; Noble, Sinha & Kumar, 2002; Olavarrieta and Friedmann, 2008). However, there are many studies which concluded that market orientation enhances brand performance significantly and positively (Ruekert, 1992; Jaworski et. al.; Fritz, 1996; Pelham and Wilson, 1996; Horng and Chen, 1998; Slater and Narver, 2000; Calantone and Cavusgil, 2002; Maydeu-Olivers and Lado 2003; Pulendran, Speed and Widing, 2000; Hult, Hurley & Knight, 2004 and Tse, Sin, Yau, Lee and Chow, R 2004;).

While it was stated that there was no significant relationship or that composite relationship exists (Jaworski and Kohli, 1993; Greenley, 1995), certain studies again revealed that market orientation, as a result of, for instance, some regulatory impact and the exterior factors, increase performance (Slater & Narver, 1994; Greenley, 1995; Appiah-Adu, 1998; Chang & Chen, 1998; Harris, 2001; Gruber-Mueck et. al, 2015; Asheq et.al., 2019). One of the conclusions made was that market orientation and performance appeared to have a positive relationship in studies conducted in the United States of America, while studies carried out in other countries established a weakened relationship and even that it became unproductive (Kumar, Subramanian & Yauger, 1998). Same findings have been found in research conducted in various cultures and countries in recent years (Eris et al., 2012).



The current study, however, found different perspective on the effect of market orientation to brand performance. While the market orientation literature offers support that a market-oriented culture can be an essential element of business performance, this study found that it does not have a direct effect on brand performance. Previously, researchers argued that by pursuing and reacting to customer's demands and preferences, market-oriented firms can better satisfy customers and achieve greater firm performance (Greenley, 1995; Kohli et al., 1993).

The finding of this study is also not consistent with Fiol's (1991), who indicates that organizational culture can be a source of sustainable competitive advantage and superior performance, when it provides a basis for value-creating activities and when it is scarce among different competitors. In a similar way, Atuahene-Gima et al., (1995) and Narver et al., (2004) suggested and tested a general association between market orientation and new product performance. They further suggested that firms which practice market orientation are more apt to have strong brands. Additionally, Kohli et al., (1990) have also found evidence that market orientation offers better coordination, products review and a unified focus. Therefore, this outcome may suggest that there should be a mediator for the market orientation-brand performance relationship.

There are two possible justifications as to why the aforesaid relationship is not significant in the context of this study. Firstly, it has been debated that in a huge part of small enterprises, marketing concept is not implemented and that the decision whether to implement it or not rely on business goals (Peterson, 1989). Peterson further argues that in small enterprises it was found that they are not motivated to implement marketing concept because profits are not a paramount goal in their business operations even though they may believe that the implementation would produce greater profits.

Alternatively, it may be that market orientation could be perceived as a set of behavioral tendencies that is implemented temporarily and/or partially by an individual pursuing to accomplish multiple goals (Tregear, 2003). Therefore, goals can provide a clarification for the extent of the adoption of marketing practices and business philosophies of small business owner-manager. Past studies suggest that they are not always appealed to marketing if expansion or growth is seen unnecessary (Hogarth-Scott et. al, 1996).

Though past studies have provided supporting empirical evidences on the direct relationship between market orientation and brand performance, the result is not totally consistent; specifically, where performance profitability measures are concerned (Greenley, 1995; Slater and Narver, 1995). Another possible reason is that the market-oriented culture affects may be mediated by another significant intangible (e.g., knowledge-related) resources, which indirectly implies the mediating role of knowledge-related resources. For example, Olavarrieta et al., 1999) reported the role of knowledge-related resources as a mediator between market orientation and firm performance. This explains why market orientation does not influence brand performance. Therefore, this result suggests that in order for market orientation to take effect on brand performance, there is a need to inculcate essential behavior, attitudes and actions to be articulated in an on-going communication with target customers.

Finally, the current study recommends that brand/marketing managers should be more dedicated to have the necessary resources and capabilities and effective brand management system in place as part of their branding strategy to establish a successful brand and achieve superior brand performance in a highly competitive marketplace. By



ensuring the critical resources and capabilities are in order, it will contribute to the effectiveness of brand management and thereafter an improved brand performance.

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## CDIO Implementation in Fluid Mechanics at UiTM Sarawak: Student Centered Learning

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### Abstract

This paper generally discusses the initial implementation of CDIO to Fluid Mechanics, a course in Diploma in Civil Engineering UiTM Sarawak. CDIO has been introduced since 2013 in the Faculty of Civil Engineering as a key driver to ensure students are industry- ready upon graduation. However, the implementation viewed to be still at the surface level due to lack of proper module being introduced for civil engineering courses. This paper highlights and depicts the method of CDIO implementation as a part of learning activities. Preliminary findings indicate that, CDIO has been successfully implemented based on student's performance. Continuous Quality Improvement report reveals student's attainment for CDIO assignment is 84.9% on the average score and 100% passes for 82 students' sample. However, there are rooms for improvement and betterment of the task given as well as preparation of rubric in the future. It is important to continuously monitor the impacts of CDIO in civil engineering courses for student achievement in fostering the generic skills to fulfill modern engineering demand during working life.

**Keywords:** CDIO, teaching pedagogy, student performance.

### 1. Introduction

Conceive-Design-Implement-Operate (CDIO) has been introduced in the Faculty of Civil Engineering since the year 2013. The main goal is to educate students to master a deep working knowledge of technical fundamental, therefore, be the leaders in the creation and the operation of new products and systems. Students are also expected to be able to understand the strategic impact and importance of research and technological development (Che Maznah, Hamidah & Mazidah, 2017). CDIO will also boost graduates' relevant skills such as thinking skills and problem-solving skills that will prepare them for the working environment. In tertiary education, conventional method emphasizes on exam result, which



is stressing on cognitive domain but lacking in psychomotor skills, problem-solving skills and critical thinking skills (Edward, 2001; Dandan, 2018). Industry feedback reveals that a majority of these students is found not ready for working life due to skills gap. Hence, in 2013, a complete CDIO framework is being implemented in the teaching and learning activities for Diploma in Civil Engineering, UiTM but the implementation is still considered to be at the surface only. This paper covers on the implementation of CDIO at course level, specifically Fluid Mechanics.

## 2. Basic Concept of CDIO

Conceive-Design-Implement-Operate (CDIO) is a modern teaching and learning approach that is widely used throughout the world in countries such as America, Europe and Asia. CDIO has become a part of teaching methodology for undergraduate study in order to grasp the graduate skills for working life. According to Edward (2001), CDIO is initiated by Massachusetts Institute of Technology (MIT) during late 1990s to produce graduates that will possess engineering knowledge and other professional generic skills such as technical knowledge and reasoning, personal and professional skills, and interpersonal skills as depicted in Figure 1.

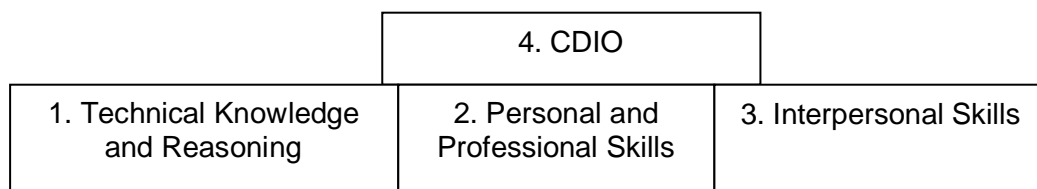


Figure 1 Building blocks of knowledge, skills, attitudes necessary to Conceive, Design, Implement and Operate Systems in the Enterprise and societal Context (CDIO). Source (Edward, 2001)

The CDIO model refers to the four stages of Conceiving, Designing, Implementing and Operating solutions that address complex engineering problems. Based on ("CDIO Region," n.d) the definition of Conceive is inclusive of defining the customer needs. Meanwhile, Design comprises the creation of the plans, drawings and algorithms that will describe the framework or planning of implementation. Implement refers to the transformation of the design into a product, including manufacturing, testing and validation. Lastly, Operate considers how the implemented product will deliver the functionality of the product. Over the years, CDIO is observed to be able to promote student centered learning instead of the traditional teacher centered learning as often seen in many engineering education (Zhongwei, Homgguang & Jinhua, 2011; Nor Hayati et al., 2014; Ludaşan, 2015 ). Andrés and Juan (2017) claimed that project-based learning following the CDIO approach can also be linked to learning through play methodologies. CDIO also encourages flipped classroom in engineering education as implemented in Singapore Polytechnic that engages students with learning activities inside and outside of the classroom as shared by Sin, Dennis and Lee (2017).

## 3. Implementation of CDIO in Fluid Mechanics

This course requires students to complete an assignment as a part of their ongoing assessment. The main objective of the assignment is to assess students' understanding on



selected topic based on their cognitive ability. Traditionally, students were given a set of questions that needed to be answered theoretically by calculations only. However, through CDIO approach, the assignment instructions were redesigned to suit the CDIO attributes that enhances students' knowledge and skills. The assignment was extended to testing or verifying the output (of the assignment) to ensure the validity of the design. This transformation is changing students' mindset from "I know how to calculate" to "I know how to solve the problem". The assignment for this course is to assess problem solving and critical thinking skill as specified by the CDIO learning sequence by the faculty.

The assignment problem (focus of this study) was designed to comprehend the buoyancy principal i.e. the ability to float any structure on water in partially submerged condition. The students were given a task to design, produce and test a simple boat that can float with minimum loading of 900 g. The only material allowed to be used was 2 sheets of aluminum foil. Students were divided into a small working group which consisted of maximum of 4 members. Instructions paper of the assignment was given to the students as guidelines and the time allocated for completion was 4 hours only. Upon completion, students have submitted two items i.e. a report that comprised of the overall framework inclusive of the boat design calculations with justifications, and the boat model. Lecturers evaluated the work of students based on the report and verified the design by testing the boat model in water together with students.

CDIO approach no longer requires an answer scheme (as traditional method would have been) but emphasizes on how the problem is being solved and successfully tested in real situation. Hence, lecturers must prepare a comprehensive rubric (of the selected syllabus topic) that allows the evaluation of problem solving and critical thinking skills in completing the task as shown in Table 1. The evaluation criteria are no longer stressing on the values calculated theoretically on paper but more towards the process of actually solving the problem by identifying the problem definition, analyzing the problem based on current scenario, developing a framework of the solution, implementing the process and evaluating the outcomes.

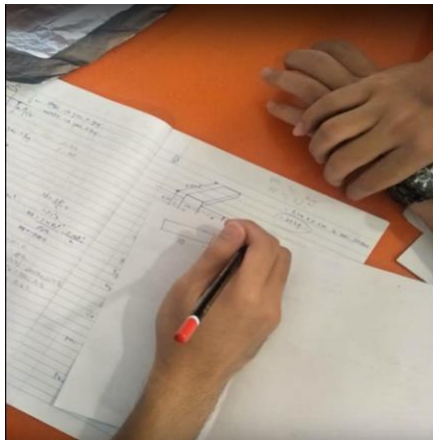
In the buoyancy assignment, the rubric was constructed to assess the ability of students to apply their buoyancy principle knowledge to design their boat model by a trial and error process to ensure the boat will be able to carry 900 g of load and to remain stable on water. Students identified the weakness of their initial design by testing the first boat model and improved their second boat model design. This trial and error exercise exposes students to develop critical and creative thinking in order to solve the problem. It shows that CDIO can develop students' ability to be self-centered and engage students with experiential learning process that requires students to think beyond textbooks and lecture notes. Students were also actively involved in ensuring their boat model can be fully operated (floating and stable) within the time frame. This scenario transformed the typical dull learning environment (in traditional class) to a lively learning environment that does not only encourage students centered learning but also peer learning. Students were given the freedom to use their creativity to solve the problem. This proves that the application of the theories learned in lectures is no longer restricted to laboratory work only as shown in Figure 1. Learned theories can also be applied within the classroom where students have the freedom to explore other possible methods of learning and independently manage the resources and sources to solve a problem within the time frame.



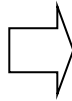
**Table 1: CDIO ENGINEERING PROBLEM SOLVING EVALUATION**

C-D-I-O	Category	Mark				
			E	D	C	B
C	Problem definition	5	1	2	3	4
			Define precisely the problem to be solved by thinking through the key facts about the problem, and gather any			
			Able to define vaguely the problem to be solved with buoyancy principle	Able to define broadly the problem to be solved with the weight of boat and buoyant force.	Able to define moderately the problem to be solved with weight of boat, density of fluid and buoyant force.	Able to define substantially the problem to be solved by thinking through the weight of boat, buoyant force, density of fluid and displaced volume.
C	Problem analysis	5	1	2	3	4
			Selecting and using information to analyse suitable dimensions of boat that can cater the minimum required			
			Able to recognise the buoyancy principle	Able to describe the buoyant force and the weight of boat	Able to analyse the weight of the boat and buoyant force	Able to analyse the weight of boat, the buoyant force and the boat dimension
D	Plan development	5	1	2	3	4
			Shows a well-developed plan that include the action steps for implementation and the timeline.			
			Produce a poor plan with many missing elements.	Produce a moderate plan with few missing elements.	Generate an acceptable plan with sufficient elements.	Generate a good plan with sufficient elements.
I	Plan Implementation	5	1	2	3	4
			Supervised and monitored to ensure that the plan is followed accurately, implementing corrective action when			
			Implementation is carried out with a close supervision	Implementation is carried out with frequent supervision	Implementation is carried out with a periodical supervision.	Implementation is carried out with a minimum supervision.
O	Outcome evaluation	5	1	2	3	4
			Evaluate outcome of the executed plan, to measure and analyse its success, whether the designed boat is effective in carrying the minimum required mass.			
			Able to recognise the outcomes (the designed boat has failed)	Able to identify the outcomes (why the design of boat has failed)	Able to explain the outcomes (why the design of boat has failed)	Able to evaluate the outcomes and the designed boat can carry the minimum required mass

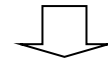




Design and planning process  
(Conceive & Design)



Boat model fabrication  
(Implement)



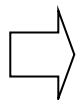
Problem identification



Boat model (first trial)



Boat model improvement  
(second trial)



Testing (Operate)

**Figure 2: Workflow on assignment task**



### 3.1 Student performance

Student attainment is evaluated through continuous quality improvement (CQI) report as shown in Table 2. This assignment addresses Program Outcome 2 (PO2) and Course Outcome 2 (CO2). It shows that students are capable to complete the task with minimum supervision from the lecturer. On the average score, student attainment is 84.9% with all students scoring more than 50%. The lowest score is 80% while maximum score is 86%. Referring to the average score, it is concluded that student achievement is excellent based on PO's performance criteria matrix. This proves that CDIO is effective for lecture class. Traditionally, students were only able to test their ability on operating system, equipment, software or product during laboratory or studio sessions. However, with the implementation of CDIO students are able to create any framework, solution based on software, or product even during lecture.

In the case of civil engineering program, CDIO is viewed to be nearly impossible as the end product is normally considered to be of much larger scale and costly such as the construction of highway, building or any relevant structures including dam. But the limitations can be reduced by preparing the problem task based on the fundamental concepts within the scope of the course syllabus. The challenge is to the lecturers to construct students' activities that reflect the fundamental knowledge in classes; applying the concepts in similar real-life engineering situations but simpler enough to be completed by students within the constraints of the classroom, time and cost. CDIO approach is expected to bring engineering education together with engineering practice in classrooms.

**Table 2: Students' attainment for CDIO assignment**

	CO2	PO2	Key performance indicator
Average score	84.9	84.9	Excellent
Number of students > 50%	100.0	100.0	
Minimum score	80.0	80.0	
Maximum score	96.0	96.0	

Initially, some lecturers hesitated to implement CDIO as part of teaching and learning activities due to lack of proper training on civil engineering module. But through the persistence and determination of supportive lecturers, CDIO implementation in general has been a success at course level.

There are still rooms for improvement in the implementation of CDIO in civil engineering that can encourage student achievement upon graduation such as:

- Instruction guidelines for students.
- Training for lecturers on civil engineering module to ensure lecturers will be able to conduct the class with full understanding and preparation.
- Preparation of the evaluation rubric.
- A complete module for Diploma in Civil Engineering should be introduced to help lecturer in teaching and learning process.



#### 4. Conclusion

The implementation of CDIO is viewed to be one of the teaching pedagogies which promotes relevant skills for our graduates. CDIO is one of the platforms to encourage flipped classroom – from passive to active. The buoyancy assignment was designed to fulfill all four elements of CDIO (Conceive – Design – Implement – Operate) instead of the traditional method that ends at conceive only (calculations). In completing the task, students can work independently to solve the problem using critical thinking. Students' adaptability towards CDIO assignment is reflected as excellent in student scoring for key performance indicator.

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## Critical Factors Influencing Decision to Adopt Digital Forensic by Malaysian Law Enforcement Agencies: A Review of PRISMA

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### Abstract

The technological advancement in today's era has been characterized by a proliferation of digital devices and system. This scenario is seen significant in bringing a great impact to the increasing needs of digital forensic to be recognized as a crucial tool and yet an investigative procedures in facilitating today's organizations especially the law enforcement agencies to react into the cybercrime cases that fall under their respective jurisdiction. However, in a context of a developing country, the adoption nature towards digital forensic by Malaysian law enforcement agencies is unfavorable which ultimately affects an efficient, timeliness, cost-effective, and less-impact of digital evidence investigation. The purpose of this paper is to examine the factors affecting the decision of Malaysian law enforcement agencies to adopt digital forensic. The study employed PRISMA as a reference methodology to identify the factors and developing the initial adoption model. The methodology has revealed 12 factors that influence the adoption decision of digital forensic. These factors are organized into three dimensions under the premise of TOE framework namely technological, organizational and environmental. The study is contributing by addressing the key driving factors that delineate an understanding towards the context of digital forensic as an innovation adoption at the organizational level in which further will be exploited to formulate the adoption model.

**Keywords:** Digital Forensics, Digital Forensics Adoption, Innovation adoption, Law Enforcement Agencies, TOE.

### 1. Introduction

A rapid evolution of information era nowadays has been characterize by a proliferation of digital devices and system. This has led to an increasing need of digital forensic (DF) as an effective tool in facilitating organizations to respond towards various cyber associated crimes as well as to provide admissible digital evidence through a legitimate evidence investigation. However, despite the notable benefits that can be derived from DF technology, the pace towards DF adoption into the technology structure in an organization of developing countries is unfavorable (Aswami, Jill & Husin, 2012; Kasun, Keerthi, & Ravith, 2016; Khuram et al., 2014; Obwaya, 2011; Sommer, 2005). In a context of a developing country, Malaysian law



enforcement agencies are considered as a focal point to any reported incidents that need for digital investigation in relation to matters that fall within their respective jurisdiction. Yet, very few of these agencies have incorporated DF into their technology structure to enable a timeliness, cost-effective, efficient and low-impact digital investigation (Aswami et al., 2012; Aswami & Izwan, 2008).

The increasing number of requests for DF investigation and referred incident cases encountered by Cyber Security Malaysia (CSM) in which an agency that established under the Ministry of Science, Technology and Innovation who serves as one of the authority body in cyber and digital security matters has been reported by Rafizah & Aishah, (2013). This situation has drawn a picture of the agencies' reliance on DF technical support. In this case, the situation has been aggravated by an issue that leads to incompetency in the conduct of DF investigation (Aswami et al., 2012; Aswami & Izwan, 2008; Sarah, Miratun, & Zabri, 2018) as the processes involved become very time consuming which later resulted in delay on the actions taken in response to the reported incidences. At this point, the incompetency also refers to the productivity of the agencies which is affected due to the interruption of their business operation during the process taken for the investigation. Indeed, Danielsson & Tjostheim (2004) also raised the privacy concerns if the DF function is outsourced to a third party. Therefore, it is important for today's organizations to recognize the importance of DF in their organizational environment. Having DF in place will enhance the organization's capacity to give a fast respond to the security occurrences (Elyas et al., 2015; Suhaila et al., 2011; Mankantshu, 2013; Saleh, 2013). When incidents occur, DF investigation attempts to be conducted efficiently to react to the incidents without delays (Mouhtaropoulos, Li & Grobler, 2014; Mouhtaropoulos et al., 2013).

In general, the lack of coherent understanding and guidance on DF practices is found to be the causal of the sluggish adopting nature of DF among the organizations (Hamdi, 2011; Suhaila et al., 2011). In Malaysian context, the issues of DF are fairly explored (Aswami et al., 2012; Aswami & Izwan, 2008) primarily to provide the coherent understanding on the potential factors to assist organizations namely the enforcement agencies towards the adoption of DF. Hence, the acknowledgement of these factors is expected to address the above mentioned issues. Consequently, as a part of this study, it is an attempt to develop a framework that looks into the drivers influencing Malaysian law enforcement agencies' decision to adopt DF.

The proposed model is expected to support the Malaysian enforcement agencies in using DF and at the same time to serve as a guideline for the decision makers of the agencies to gain an understanding in evaluating DF to be adopted in their organizations. Additionally, as DF is mostly being studied in technical perspective, therefore, this study is hoped to complement the scarcity of DF domain in organizational adoption context. In response to Pangalos, Ilioudis & Pagkalos, (2010) the present endeavor is aligned with the recommendation made by them who advocated that, the scope of forensics needs to be expanded into another domain in order to encompass the perspectives difference and to ensure the continuation of maturity of this discipline. Thus, the model developed is expected to be utilized by the community of the discipline for the expansion of the body of knowledge for all the growing importance of DFs. The next section will look at the related studies, the theoretical foundations for the study's framework, methodology, proposed framework and the conclusion of this paper.



## 2. Related Studies

The adoption of DF has been studied by some researchers namely in Hamdi (2010) and Obwaya (2011). However, both studies are lacking in providing a comprehensive factors affecting the adoption of DF as according to Yang, Sun, Zhang, & Wang (2015), it is necessary to consider technological, organizational and environmental factors in studying organizational innovation adoption to reflect the basis of innovation characteristic. For instance, Hamdi (2011) performed a quantitative study to investigate the variation in digital forensic practice adopted by large local police agencies in the United States, however the study was solely focused on the organizational factor and the environmental constraint. Hence, this study covers on the theoretical perspective which offers a broader combination of influential factors that reflect a particular adoption context.

## 3. Technology-Organization-Environment framework (TOE)

Considering three theoretical perspectives of technology, organization and environment in the study in order to provide a comprehensive basis of innovation characteristics, Technology-Organization-Environment framework (TOE) has been identified as the most influential theory used to guide the expansion of research and supporting the technology-innovation-adoption discourse (Zhu et al., 2004). Tornatzky & Fleischer, (1990) advocated the technology–organization–environment (TOE) framework to be used in conducting a study on innovation adoption. Inclusion of technological, organizational and environmental variables has made TOE advantageous over other adoption models in studying innovation adoption, innovation use and value creation from the innovation (Hossain & Quaddus, 2011; Oliveira & Martins, 2010; Ramdani et al., 2009; Zhu & Kraemer, 2005). Also, it is flexible regardless the size of an industry and organization (Wen & Chen, 2010). Hence, it provides a holistic picture for user adoption of innovation, its implementation, foreseeing challenges, its impact on value chain activities, the post-adoption diffusion among firms, factors influencing business innovation-adoption decisions and to develop better organizational capabilities using the innovation (Wang et al., 2010; Salwani et al., 2009; Lin & Lin, 2008; Zhu et al., 2004).

Moreover, Oliveira & Martins (2011) in their study proved that TOE framework has a solid theoretical basis, consistent empirical support, and the potential of application to technological innovation domains, though specific factors identified within the three contexts may vary across different studies. There are three types of contexts that may influence the innovation adoption. a) Technological context describes both the internal and external technologies relevant to the firm. This includes current practices and equipment internal to the firm (Starbuck 1976) as well as the set of available technologies external to the firm (Thompson, 1967; Khandwalla, 1970; Hage, 1980). (b) Organizational context refers to descriptive measures about the organization such as scope, size, and managerial structure. (c) Environmental context is the arena in which a firm conducts its business, competitors, and dealings with the government (Tornatzky & Fleischer, 1990).

A consistent empirical support in TOE usage to study the adoption of innovation was also found by Yi, Hsie, Ci, & Ding, (2016) Abdullah and Stanier, (2015), Ahmadi et al., (2014), Hsiu (2014), Oliveira & Martins (2011), Oliveira, Thomas, & Espadanal (2014), Wang et al., (2010). Owing to the consistency of TOE framework in the aspects of empirical works, literature review as well as theoretical perspectives, considering TOE framework in this study will provide an appropriate comprehensive foundation for studying the factors influencing adoption of DF in a setting of organizational level.



#### 4. Methodology

Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement of Moher et al., (2010) is used in the study to review and analyse DF and technology adoption literature and finally to develop an initial theoretical model in investigating factors influencing the evaluation of DF adoption by Malaysian law enforcement agencies. The structured review provides an integrated result of included studies through a systematic and explicit approach and also via the use of statistical techniques (Moher et al., 2010).

This methodology has been widely conducted in various fields of studies for the purpose of gathering a comprehensive literature review (Mojtaba et al., 2016). There are four main phases involved in PRISMA methodology conducted in the present study. This phase consists of identification (Phase 1), screening (Phase 2), eligibility (Phase 3), included (Phase 4). The activities of Phase 1 involve literature searching using a keyword as a descriptor, paper gathering and the creation of reference database.

Five online databases were selected in regard to their relevance in the field of DF, Forensic science, information system, information security and computer science. The chosen online databases were Science Direct, IEEE, Taylor and Francis, Springer and Emerald Publishers. The following keywords were used to run the queries against the database: "Digital Forensic, Digital Forensic adoption, DF technology adoption, computer forensic, computer forensic adoption, forensic computing, and technology adoption".

The screening and the selection of study for eligible papers occurred in phase 2 and phase 3 in which the screening process involved in Phase 2 included the removal of duplicated papers with redundant content. At the same phase, the screening then was performed on the titles and the abstracts and the removal of irrelevant studies was made. In the next phase (Phase 3), a manual skimming was carried out on the full text papers extracted from the previous phase for the eligibility purposes.

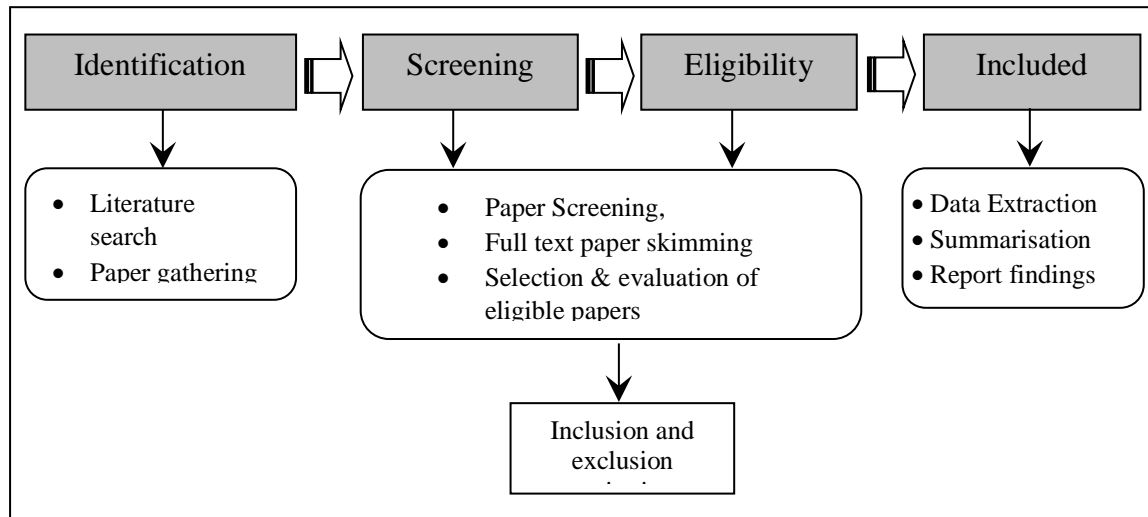
In the final phase of methodology (Phase 4), the activities included data extraction and summarization. At this phase, the remaining papers were summarised, and significant potential factors were derived in which reflecting the basic premise of the TOE framework. To ensure the quality value of the papers, the screening, skimming and selection were carried out according to the predetermined inclusion criteria as depicted in Table 1.

**Table 1: Systematic Review Inclusion Criteria**

Inclusion Criteria	<ul style="list-style-type: none"> <li>Thus, the articles were gathered between the years of 2005 to present (DF is relatively new; therefore there is no restriction on the period of time considered in the searching)</li> </ul>
	<ul style="list-style-type: none"> <li>Papers published in academic journals and international conferences only</li> </ul>
	<ul style="list-style-type: none"> <li>The presence of keyword in title or abstract</li> </ul>
	<ul style="list-style-type: none"> <li>Full text article</li> </ul>
	<ul style="list-style-type: none"> <li>Papers discussed the factors of DF adoption as well as DF practices, implementation and technology adoption at organizational level. (a review of prior research works has been extent to technology adoption literature to compliments the limited numbers of prior studies on DF adoption)</li> </ul>



The whole process involved in reference methodology was supported by software package namely Mendeley to build references database and to support citing and referencing. The summary of activities and phases involved in the systematic review of PRISMA was mapped out in Figure 1.



**Figure 1: Summary of the systematic review approach**

## 5. Discussion

The searching has revealed a total number of 337 scholarly articles. Based on the exclusion criteria, the screening process was guided. The screening resulted in the remaining of 211 potentially articles after the removal of identical papers with duplicated information. The next screening process then was continued by filtering the titles and abstracts. Any titles and the abstract with no relation to DF adoption and other domain of technology adoption factor were removed. Yet, guided by inclusion and exclusion criteria, manual full paper skimming was performed for 87 potentially relevant primary studies.

Finally, this review resulted in 33 articles used for main primary studies. Phase 1 aims to capture any literature that discussed about technology adoption notably DF practices and adoption factors, the analysis was then performed to identify the factors that influence the adoption behaviour at organizational level. In the third phase, the data extraction was conducted to scrutinise the relevant findings using three dimensions of multiple perspectives that reflect the rooted premises of TOE framework. Finally, the extracted data was proposed and summarised into frequency as a finding report. The exclusion and explicit inclusion criteria were used to provide a rigor reliability and eligibility of the studies finding and review approach. The overall study finding of potential factors influencing the decision to adopt DF by Malaysian law enforcement agencies and a brief description of each factor are described in Table 2 and Table 3.



**Table 2: Factors Influencing the Decision of DF Adoption by Malaysian law Enforcement Agencies**

Author	Innovation/ Technology Studied	Dimensions/Factors										
		Technology			Organisation				Environment			
		Relative Advantage	Complexity	Compatibility	Size of Agency	Top Management Support	Infrastructure	Culture	Governance	Coercive Pressure-Government	Normative Pressure	Vendor Support
Barbara et al. (2007)	DF						√		√			
Chang et al. (2007)	Electronic Signature		√		√							√
Quaddus & Hofmeyer (2007)	E-Commerce											√
Barske et al. (2010)	DF						√		√			
Grobler et al. (2010)	DF	√					√	√	√			√
Ming et al. (2010)	RFID	√	√				√					
Yu et al. (2010)	RFID		√	√	√						√	
Hamdi (2011)	DF				√					√	√	
Chung (2011)	Tele care	√		√		√						
Chinyao et al. (2011)	Cloud Computing	√			√	√					√	
Angela & Nan (2012)	Cloud Computing	√	√	√								
Chi et al. (2012)	HL7		√	√	√					√	√	
Poore & Labuschagne (2012)	DF						√		√			
Abdollahzadeh ganet al. (2013)	Cloud Computing	√	√	√	√	√						
Morgan & Conboy (2013)	Cloud Computing	√	√	√								
Makena (2013)	Cloud Computing	√	√			√						
Edwin & Peter, (2014)	E-Commerce	√			√		√			√		
Hui et al. (2014)	RFID	√	√	√	√	√	√			√	√	√



Hsiu (2014)	e-Supply Chain Management (e-SCM)	√	√			√						
Jiunn et al. (2014)	Cloud Computing			√		√	√			√		
Alkhater et al. (2014)	Cloud Computing	√	√	√	√	√						
Oliveira et al. (2014)	Cloud Computing	√			√	√						
Hossein et al. (2015)	HIS	√			√		√			√		√
Elyas et al. (2015)	DF					√	√	√	√			
Kazadi (2015)	DF			√								
Mitha & Venter (2015)	DF			√								
Muhammad Zulkifly (2015)	DF						√					
Rahayu & Day	E-Commerce	√		√			√					
Cassandra (2016)	Records Mgmt System and Broad band Networking		√							√		
Mohammed et al. (2016)	Cloud Computing	√	√	√		√	√					
Al-isma'ili et al., (2016)	Cloud Computing	√		√	√	√						
Yi et al. (2016)	Mobile Hotel Reservation System (MHRS)			√	√		√					
Hossein et al. (2017)	HIS	√		√	√		√					√
<i>Frequency / Support</i>		18	13	16	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{5}$	2	5	7	5	6

An integration of factors considering comprehensive dimension is important to provide a holistic and inclusive understanding of innovation characteristics (Grover, 1993; Zhaojun Yang et al., 2015). Hence, the identification of factors that influence the adoption decision of DF is reviewed using TOE framework to help decision makers of the enforcement agencies in allocating the technological, organizational and environmental resource.

**Table 3: Description of Factors**

Factors	Description
Relative advantage	The degree to which DF is perceived as being better technology in providing greater benefit than its precursor.
Complexity	The degree to which DF is perceived as being relatively difficult to understand and use.



Compatibility	The extent to which DF fits with the agencies' need, goals, corporate culture and value as well as current agencies' infrastructure such as laboratory systems and networks.
Agency Size	The degree and extension of resources own and able to be provided by the agencies includes number of human resources and infrastructure.
Top Management Support	Support of DF by the senior management of an organization.
Infrastructure	A physical resource and system design to facilitate the agencies in maximizing the DF capability.
Culture	A set of shared values, beliefs, assumptions and practices that shape and direct organizational members attitudes and behavior towards DF.
Governance	The practices and structures in the organisation that enable forensics
Coercive Pressure	Formal influence of the government on an innovative technology that will considerably affect the adoption of DF in the agency.
Normative Pressure	An influence from those that exerted by professional organizations that dealing with the agencies to adopt the similar innovation.
Vendor Support	The level of support provided by the external DF vendor during and after the adoption.

## 6. Initial Model

### 6.1 Technological Dimension

As elucidated by Oliveira and Martins (2011), the technological includes both the internal and external characteristics of technologies relevant to the firm. In the context of DF, it represents the characteristic of technologies used in the agencies, that is a highly specialised software tools or physical hardware tools that specifically used for forensic purposes.

Reflecting the technological characteristics of digital forensic with the systematic review of literature in Table 2, the factors considered under this dimension are relative advantage, complexity and compatibility. Relative advantage refers to the degree of potential benefits on digital forensic perceived by the decision makers of the agencies that describes greater advantages of digital forensic as new technology adoption replacing the traditional scientific and investigative problem-solving approaches (Mark, 2010; Suhaila et al., 2011). Complexity is described as the challenges inherited in digital forensic, the dissimilarity elements of the forensic tools which required a sophisticated and a costly digital forensic tool to overcome the issues of technical incompatibility as well as lack of standardised procedure on digital forensic implementation, and the need for a new and updated skills and expertise to perform digital forensic (Karie & Venter, 2015). The compatibility refers to an extent to which this technology fits with the agencies' values and beliefs, goals, current agencies' practices and also with current agencies' infrastructures (Rogers, 1995).

### 6.2 Organisational Dimension

Organisational dimension represents the characteristics of the organization that can be internally measured that is top management support, infrastructure, culture, governance, and size of agency. Top management support is referring to the degree to which a group of people engaged with the strategic decision making understand the importance of the innovative



technology adoption which later building a great influence on the adoption of digital forensic in the agencies.

Infrastructure is described as forensic physical structure which includes a well architecture network and a well-equipped laboratory with the admissible and accepted hardware and software (tools) to enable the agencies to conduct the digital forensic activities particularly for investigative and non-investigative purposes (Elyas et al., 2015; Grobler et al., 2010). Culture in a context of the current study is defined as a set of shared values, beliefs, assumptions and practices that shape and determine the direction of organizational members' motivation towards digital forensic which further will affect the extent to which the agencies are willing to adopt the innovation.

Governance is considered as a distribution of decision authority to manage the activities of digital forensic as the factor of governance was found essential to the state of digital forensic in an organization (Mankantshu, 2013). Size of the agency refers to the extension of resources owned and able to be provided by the agencies including the number of technical staff and infrastructure.

### **6.3 Environmental Dimension**

The environmental factors are referred to both the internal and external factors (Olutoyin & Flowerday, 2016) that could exist in a form of pressure or support (Marimuthu et al., 2011) which comes from the environment that comprises the government, suppliers, vendors, and customers. Likewise, Hamdi (2011) contended this dimension as an external pressure that has brought the largest impact on the adoption of digital forensic by the enforcement agencies in the United States.

This dimension represents the current operating environment of the Malaysian enforcement agencies which may affect the adoption of digital forensics in their working place. In the context of this study, the external factor of the agencies includes the external pressures of coercive and normative as well as the external support that is vendor support. Coercive pressure is referred to an external force that originated from the government entities as an authorize body that holds the control upon the enforcement agencies as well as the agencies' wellbeing. In this case, the sovereigns' value influences the decisions of the agencies to adopt structures or practices that serve the interests of the government as an exerting entity (Sila, 2013).

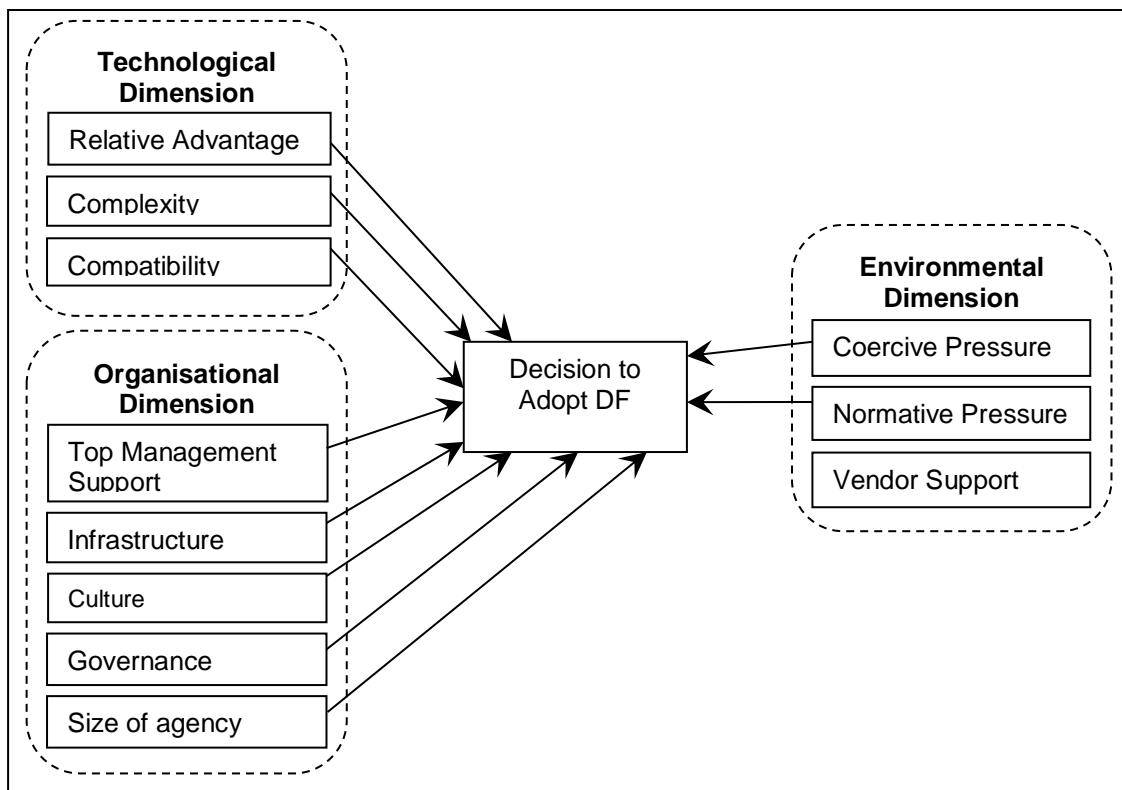
In this study, a normative pressure to adopt digital forensic may be present as the enforcement agencies are interrelated to each other generally under the direct purview of sovereigns. A normative pressure is highlighted as an influence that is exerted by suppliers, customers, and business, trade and professional organizations to adopt a certain innovation (DiMaggio & Powell, 1983). In the setting of the organizational adoption studies, normative pressures take place upon professionalism in which an organization's behaviors are subjected to the shared values and the norms of other organizations through relational channels of their social network (Alsaad et al., 2014; Hamdi, 2011; Oliveira & Martins, 2011; Yang et al., 2013).

The present study defines vendor support as the level of ability of the external digital forensic vendor to provide services that may include technical and training support as well as a full-scale consultancy engagement. As being a new and growing technology in the industry, digital forensic presented several challenges to its practicing organization (Hoss & Carver, 2009; Karie & Venter, 2015; Nance & Ryan, 2011). Therefore, relying upon vendors for such assistance on technical, training and advice are indispensable.



Despite offering and supplying subsequent updates and new technical needs, the agency would rely on vendor for specific forensic skill and software training (Derek, Francine, Ewa, & Oscar, 2008; Trenwith, 2013). Perceived technical competence reflects the capability of technical employees in the agency (Jiunn et al., 2014) as well as the skills and the knowledge possessed by the employees on the innovative technology (Hossein, Mehrbakhsh, & Othman, 2015; Jiunn et al., 2014; Rahayu & Day, 2015).

In the context of this study, perceived technical competence refers to the degree of which the employees possess sufficient knowledge and specialised skills on digital forensic to perform the forensic tasks in order to achieve the forensic initiatives.



**Figure 2: Initial digital forensic adoption model**

## 7. Conclusion

The aim of this paper is to provide a comprehensive understanding of the factors influencing the digital forensic adoption's decision by Malaysian law enforcement agencies. Using Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) approach, the study revealed 12 factors that needed to be considered by the decision makers of the agencies in evaluating the adoption of digital forensic to be in placed in their organization. These factors were categorized into three dimensions (Technological, Organizational, and Environmental) to formulate the initial digital forensic adoption model.

As a part of an ongoing study, the initial model will be developed using a quantitative descriptive study approach in which law enforcement organizations as a unit of analysis. It has been discovered that quantitative approach is prevalent in studying technology adoption issues at organizational level (Choudrie & Dwivedi, 2005). Hence, this study works on



identifying factors that will critically contribute to the decision of Malaysian law enforcement agencies to adopt digital forensic as well as running a theoretical analysis. Finally, the theoretical model proposed will be validated using a survey via an instrument of questionnaire that will be distributed to the decision makers of the agencies.

This paper plays a part in the expansion of the body of knowledge by addressing the driving factors that affect the evaluation process of digital forensic innovation adoption thus contributing to the development and the proposition of a framework that works to serve as a guidance and idea for the decision makers of an organization to better understand on the adoption decision of digital forensic.

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## Sustainable Solid Waste Management from the Perspective of Strong Regulation

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### Abstract

Despite the importance of the aspect of strong regulation towards a sustainable solid waste management system, there are still few studies focusing on analysing the sustainability of solid waste management from the perspective of strong regulation. Hence, this study aims to analyse the sustainability of the solid waste management system from the perspective of strong regulation. To conduct this study, Kota Kinabalu, Sabah was selected as a case study. Both qualitative and quantitative approaches were employed. The quantitative approach was mainly used to support the findings collected from the qualitative approach. Data collected were mainly through interviews, questionnaires and secondary data. Based on the overall findings, the study found that the sustainability of the existing solid waste management system in Kota Kinabalu, Sabah is still considered as unsustainable, as it still has weak regulation. This is reflected when the study found that the elements of strict enforcement and strict regulation in Kota Kinabalu were found to be less strict. Hence, the study suggests that to move towards a sustainable solid waste management system, it is important for the local government in Kota Kinabalu, Sabah to implement stricter enforcement and stricter regulation pertaining to its solid waste management.

**Keywords:** Solid waste management, Strong regulation, strict regulation, strict enforcement, policy.

### 1. Introduction

Solid waste is usually managed by the local government and it has been recognised as one of the major contributing factors towards the negative environmental impact in the world (Dawda Badgie, Samah, Manaf, & Muda, 2012; Schübeler, Wehrle, & Christen, 1996). This is reflected when the majority of the local governments around the world have experienced challenges in managing their solid waste (Omran, Mahmood, Abdul Aziz, & Robinson, 2009). It is further exacerbated with the growing number of people, as it leads to the increased of waste generation, especially since waste that is poorly managed may pose a negative impact to the environment (Onu, 2000; Tchobanoglous, Theisen, & Vigil, 1993). By referring to the concepts of Integrated Sustainable Solid Waste Management (ISWM), it is demonstrated that the issues of solid waste management are very complex, as it can not only be influenced by the aspect of technology, but it can also be influenced by other aspects, such as policy,



technology, economy, environment, social and institution (Klunder & Anschütz, 2001). Hence, it is wrong to assume that the issues of solid waste only involve one particular aspect such as technology. However, based on the previous studies, countries especially the developing ones tend to assume their issues of solid waste as purely technical (Guerrero, Maas, & Hogland, 2013; Klunder & Anschütz, 2001; Mosler, Drescher, Zurbrugg, Rodríguez, & Miranda, 2006). This is reflected when they tend to analyze their issues of solid waste management, solely from the perspective of technology (Guerrero et al., 2013; Klunder & Anschütz, 2001). Hence, the majority of the developing countries prefer to address their solid waste issues mainly from the perspective of technology (Agamuthu, 2004). This is reflected when there is an increase in technology transfer between the developed and the developing countries specifically technology relating to the solid waste disposal such as incinerator facilities (Agamuthu, 2004). Incinerator facilities are a common method used in the developed countries in disposing their solid waste, as it is considered as more environmentally friendly compared to landfilling (Dawda, 2010). Even though some developing countries have managed to improve their solid waste system after the adoption of such technology, others still fail to improve (Agamuthu, 2004). This suggests that relying on the aspect of technology alone is not a guaranteed solution in addressing the issue of solid waste. Furthermore, in most developing countries, there are still limited studies conducted in analyzing the sustainability of solid waste management from the perspective of policy, especially in the aspect of strong regulation, despite the results from previous studies which claim that the issues of solid waste management in developing countries are commonly associated with the aspect of policy (Agamuthu, Khidzir, & Hamid, 2009; Asase, Yanful, Mensah, Stanford, & Amponsah, 2009).

## 2. Background of Study

Kota Kinabalu is the state capital of Sabah, Malaysia and considered as the main entry to the state of Sabah (DBKK, 2011). It has a total population of 452 058 which mainly consists of Chinese (21%), Bajau (16%), Kadazan/Dusun (15%), Malay (8%), Murut (0.5%), other Natives (13%), Non-natives (1.5%) and Non-Malaysian Citizens (24%) (Fatma Sabariah, Manaf, & Mariani, 2013). Kota Kinabalu has a total area of 351 square kilometres and is adjacent to the districts of Tuaran and Penampang. The municipal solid waste management systems in Kota Kinabalu mainly fall under the administration of Kota Kinabalu City Hall (KKCH). This is clearly reflected in the Sabah local government laws under the Local Government Ordinance 1961, where it is mentioned that the responsibility of municipal solid waste management in Sabah falls under the respective city/municipal/district council and this responsibility includes the collection, treatment, and disposal of solid waste (MHLG, 2006; State of Sabah, 1979).

In Sabah, its local government is governed under Local Government Ordinance (LGO) (1961). The LGO allows the establishment of Local Government in Sabah and empowers the local government to perform a broad range of functions [15]. Section 49 (1) Part V defines these functions of the Local Government Ordinance (LGO) as:

- i. Keeping clean streets, bridges, squares, playing fields and other open or closed public places in the (LA) area (section 49(1)(39));



- ii. Requiring any owner or occupier of land to keep such land in a clean condition (section 49(1)(41));

Furthermore, the local government functions in Sabah are also described in the section 38 of the LGO, where the functions include to “control and care for public places, streets, etc., in urban areas”. However, contrary to Section 73 (1)(a)(I) of the Local Government Act, the section does not describe any provision pertaining to treatment, disposal and waste collection services to the owners’ premises or occupiers. The provision stated above that is to “keep clean streets, bridges, squares, playing fields and other open or closed public places”, is considered the only relevant provision (MHLG, 2006).

In addition, under the Local Government Ordinance, section 50 is considered as being the most important section in addressing issues of solid waste management because local authorities are permitted to create by-laws. Anti-Litter, Hawkers, Market and Conservancy and Hygiene are among the existing by-laws that are directly applicable to solid waste management. In July 2005, Anti-litter By-Law was revised and provided an additional strength to tackle issues of solid waste by enforcing higher penalty for wrongdoing (MHLG, 2007).

Based on Kota Kinabalu City Hall (KKCH) information report, the Anti-litter By-law pertaining to disposal of waste and littering in an open area has already been imposed. However, it can be seen that there is an absence of by-law pertaining to disposal, treatment and collection of refuse from commercial or other premises and household. The Health and Urban Services Department of KKCH is responsible to administer the municipal solid waste management and its responsibility consists of managing waste collection and improving the solid waste management in KKCH. The solid waste management and waste minimization that are carried out by the state are currently uncertain on which provision of the ordinance they should adhere to. Moreover, by-laws pertaining to this function are unavailable (MHLG, 2006).

Compulsory regulation on how to separate waste and official guidelines to separate solid waste management at source is unavailable in Sabah. In addition, householders are not compelled to separate their waste since none of the councils forces them to do so. Therefore, keeping the district under their authority clean and hygienic is the main function and task of the local government (MHLG, 2006). The local government may perform these functions through its legal power which includes:

#### a) Uniform (Anti-Litter) By-Laws 2010

The entire area covered by the jurisdiction of each Local Government in Sabah practices these By-laws (Fatma Sabariah et al., 2013).

- i. “Litter” means any dust, sand, earth, gravel, clay, stone, cement, paper, ashes, carcasses, refuse, leaves and branches, grass, straw, boxes, barrels, bales, shavings sawdust, garden refuse, stable refuse, trade refuse, manure, garbage, bottles, glass, can, food container, food wrapper, particles of food or other things,
- ii. Any person who places, throws or deposits or leaves behind any bottle, glass, can, food container, food wrapper, particles of food or other articles in any public places commits an offence under these By-laws.
- iii. Any person who commits a breach or contravenes any of the provisions of these By-laws shall be liable to a fine not exceeding ten thousand ringgit and in the case



of a continuing offense, to a further fine of five hundred ringgit a day after (Uniform Anti-Litter By-laws, 2010).

b) Conservancy and Hygiene, By-Laws 1984

The entire area covered by the jurisdiction of each Local Government in Sabah practices these By-laws (Fatma Sabariah et al., 2013).

- i. Every owner or occupier of any premise shall provide one or more dustbins as maybe necessary to contain the refuse there. Every dustbin shall be:
  - Provided with tight fitting cover or lid
  - Made from metal
  - Made with capacity of not less than one and half cubic feet and not more than three cubic feet
  - Approved by council in terms of design, size and shape
- ii. The occupier of any premise shall not deposit or cause or permit to deposit any dust, filth, ashes, or refuse, to be discarded there from anywhere unless it is collected in a plastic bag.
- iii. Any person who contravenes any of the provisions of these By-laws shall be guilty of an offense and shall be convicted to be liable to a fine not exceeding five hundred ringgit and where the offence is a continuing offence, to a further fine not exceeding five thousand ringgit a day during which the offence continues (Conservancy and Hygiene By-Laws, 1984)

Therefore, this demonstrates that, in Sabah there are existing laws that can be used to tackle the issues of solid waste management. However, issues of solid waste management in Kota Kinabalu, Sabah are still ineffectively addressed (Daily Express, 2015b, 2015c). These scenarios have raised several important questions on the existing solid waste management policy in Kota Kinabalu, Sabah particularly on whether it has strong regulations. According to Guerrero et al. (2013), the aspects of strong regulation are crucial aspects towards a sustainable solid waste management especially from the perspective of policy. Therefore, as mentioned earlier, this study attempts to analyze the sustainability of solid waste management system in Kota Kinabalu, Sabah from the perspective of strong regulation.

### 3. Literature Reviews

According to Guerrero et al. (2013), strong regulation plays important roles towards sustainable solid waste management particularly from the aspect of policy. Their study claimed that strong regulation in the context of solid waste management will help to improve the solid waste management performance and indirectly contributes to a sustainable solid waste management system. Previous studies have indirectly reflected that most municipalities that have weak regulation usually have lack of strict enforcement. According to Chris Zurbrügg and Schertenleib (1998), although most countries actually have developed relevant solid waste management law to tackle their solid waste issues, it is seldom enforced strictly. Agamuthu, Fauziah and Kahlil (2009) also strongly agree that the lack of strict enforcement towards the existing solid waste law is the main reason why most countries experience issues in their solid waste management. In fact, based on the study conducted by Mbiba (2014), the ineffectiveness of solid waste management in most urban areas is highly contributed to the lack of strict enforcement of its existing solid waste regulation.



In most developing countries, the lack of strict enforcement leads to weaker regulations in its solid waste management system. In fact, it was found that although some developing countries have more advanced solid waste law than the developed countries, they still fail to tackle their solid waste issues due to the lack of strict enforcements of their existing solid waste law (McAllister, 2015). This also demonstrates that having developed solid waste law does not guarantee that issues of solid waste are tackled if the law is not strictly enforced. Moreover, according to the study conducted by Seng et al. (2010), developing countries like Cambodia have a lack of strong regulation in their solid waste management system due to the absence of strict enforcement. As a result, issues of illegal dump in their city are still unable to be addressed despite having developed relevant laws to address the issues. Similarly, due to the lack of strict enforcement in the city of Malang and Yogyakarta in Indonesia, its local government still fails to improve its solid waste management despite having developed relevant laws to tackle the issues (Meidiana & Gamse, 2011).

Moreover, similar issues are also faced by developing countries like Malaysia. The Malaysian government still experiences major issues in their solid waste system despite having introduced many policies to address the issues. For example, due to the lack of strict enforcement, the activity of waste recycling still does not show any significant changes despite the recent introduction of mandatory waste separation at the source to support the recycling activity (Moh & Manaf, 2014). A previous study has shown that, the law that is not strictly enforced will not be respected by the public (D Badgie & Muda, 2009). As a result, the solid waste management policies may not be able to be effectively implemented.

In addition, similar issues also have been experienced by other developing countries in Africa. For example, in the city of Bolgatanga in Nigeria, due to the lack of strict enforcement, its local government also still fails to improve its existing solid waste management system despite having developed laws which are relevant in addressing the issues (Ampofo, Kumi, & Ampadu, 2015). Thus, this supports the study conducted by Al-Khatib, Monou, Abu Zahra, Shaheen and Kassinos, (2010), who pointed out that the lack of strict enforcement is the main challenge of most developing countries in achieving sustainable solid waste management.

Apart from strict enforcement, previous studies have indirectly shown that many countries that have weak regulation are highly associated with the lack of strict regulation. According to Pokhrel and Viraraghavan (2005), the absence of strict regulation contributes towards the major issues of solid waste management in Nepal, particularly in the aspect of illegal waste dumping. This is also supported by the study conducted by Kum, Sharp and Harnpornchai (2005) who pointed out that it is important to develop stricter regulation, especially to control the solid waste issues experienced by most local authorities. This is indirectly reflected when developing countries like Thailand faces difficulties in promoting the activity of waste recycling due to the lack of stricter regulation to promote such activities (Muttamara, Visvanathan, & Alwis, 1994).

To support the element of strict regulation, previous studies indirectly show that mandatory law and monetary penalties play important roles. According to Sakawi (2011), mandatory law and monetary penalties will help to support the implementation of the solid waste management policy. With the presence of mandatory laws and monetary penalties, it gives the power to the local authorities to take action on those who violate the laws. Solid waste management policy will be ineffective if there is no regulation to support the policy. As an example, the waste recycling campaign that has been organized by the Malaysian government in 1993 failed to meet its objective because it was not supported by stricter regulation that is the lack of mandatory and monetary penalties (Yiing & Latifah, 2014). Similarly, due to the absence of mandatory laws, it becomes challenging for the government of Nepal to implement its solid waste management policy effectively in its capital city (Thapa, 1998).

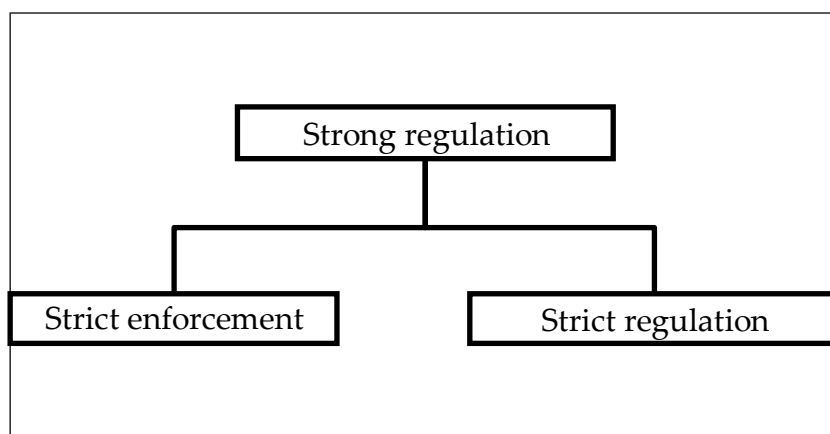


In addition, a previous study has also shown that the absence of monetary penalties will reduce the public motivation in taking part in addressing the issues of solid waste (Zuilen, 2006). In fact, in Singapore, imposing higher monetary penalties will motivate the public to follow the solid waste management law (Coffey & Coad, 2010). Similarly, according to Papargyropoulou, Padfield, Rupani and Zakaria (2014), in order for the developing countries to meet sustainable solid waste management, it is crucial to impose higher monetary penalties to those who breach the law. This indirectly supports the study conducted by Zuilen (2006), where he pointed out that low monetary penalty will make the public become unmotivated in supporting the solid waste management policy.

### **Summary of the Aspect of Strong Regulation**

The previous section has attempted to explore and discussed the term of strong regulation as highlighted by Guerrero et al. (2013). Although the previous section does not explicitly define what adequate policy is, it has somehow guided the study to summarize that a strong regulation in the context of solid waste management refers to having a strict enforcement and strict regulation (see Figure 1). Therefore, based on the literature discussed in the previous section, there are two important elements identified under the aspect of strong regulation. The first element is known as strict enforcement. Based on the previous literature, strict enforcement mainly refers to the ability of the government especially the local authorities to implement its existing solid waste regulation strictly. Previous literature shows that without strict enforcement, it will become a challenge for the local authorities to implement its solid waste management policies effectively. In fact, studies have shown that, having developed solid waste law may not be useful if it is not enforced strictly.

Moreover, the second element identified under the aspect of strong regulation is strict regulation. Based on the previous literature discussed in the previous section, it indirectly shows that strict regulation consists of the element of mandatory law and monetary penalties. These two elements are very important in the aspect of strict regulations because it helps to deter the public from breaching the law. This is because based on the previous study, it is demonstrated that the public will be more reluctant to breach the solid waste law if the government puts the element of mandatory law and monetary penalties.



**Figure 1: Aspect of strong regulation**



#### 4. Methodology

This study employed the quantitative and qualitative approaches. The data collected from the quantitative approaches were mainly used to support the data collected from the qualitative approaches. Secondary data were mainly collected from the journals, newspapers and relevant solid waste management policies such as Local Government Ordinance 1961, Kota Kinabalu Municipal Council (Anti-litter) By-laws, 1984, and Kota Kinabalu Municipal Council (Conservancy and Hygiene) By-laws, 1984. Meanwhile, data collected from primary data were mainly collected from the questionnaires and interviews. A total of 267 households were selected as sample from a total population of 452 058 in the study area (Kota Kinabalu). According to Roscoe (1975), sample sizes that are more than 30 and less than 500 are appropriate for most research. This is also supported by the study conducted by Nguyen, Zhu and Le (2015) where their study only used a sample size of 180 despite the total population of their study area that is more than 400 000. Furthermore, eight respondents from the key officials in the Kota Kinabalu City Hall (KKCH) were interviewed. Based on the studies conducted by Wan A Kadir (1997), conducting an interview with the practitioner may provide better depth of the data, especially regarding the aspect of solid waste management. The respondents consisted of the Mayor of KKCH, Director of Environmental and Health Department and two officers under this department, one officer from the Legislation Department, one officer from the Engineering Department, one officer from the Enforcement Department and former Director of KKCH. The respondents from KKCH were purposely selected as this organisation is directly responsible in developing the solid waste management policy in Kota Kinabalu. In fact, this organisation is one of the local governments in the state of Sabah which is indirectly responsible of the management of solid waste. Data collected from the secondary data and interviews were analysed using the thematic analysis, while data collected from the questionnaires were analysed using the Statistical Package for the Social Sciences (SPSS).

#### 5. Findings and Analysis

**Table 1: Findings from interviews and secondary data**

Aspect	Elements	Findings from interview and secondary data
Strong regulation	Strict regulation	Less strict
	Strict enforcement	Less strict

Table 1 presents the overall findings collected from the interviews and secondary data. The findings demonstrate that the element of strict enforcement and strict regulation in the existing solid waste management system in Kota Kinabalu, Sabah are less strict.



**Table 2: Level of strict enforcement**

	Mean		N	%
Strict enforcement	1.59	Less strict	192	71.9
		Somewhat strict	52	19.5
		Very strict	23	8.6

N=267

Table 2 indicates that the overall level of comprehensive policy in the existing solid waste management in Kota Kinabalu as less strict (71.9%), with the mean score of 1.59 (of the highest 5). This implies that the majority of respondents perceived the existing solid waste enforcement in Kota Kinabalu as less strict.

**Table 3: Level of Strict regulation**

	Mean		N	%
Strict Regulation	1.40	Less strict	183	68.5
		Somewhat strict	60	22.5
		Very strict	24	9.0

N=267

Table 3 indicates that the overall level of strict regulation in the existing solid waste management in Kota Kinabalu as less strict (68.5%), with the mean score of 1.40 (of the highest 5). This implies the majority of the respondents perceived the existing solid waste management regulation in Kota Kinabalu as less strict.

## 6. Discussion

As mentioned earlier, the aspect of strong regulation refers to the solid waste management regulation that has the element of strict enforcement and strict regulation. Based on the overall findings, it can be concluded that the aspect of strong regulation in the existing solid waste management system in Kota Kinabalu is still considered as weak. This indirectly shows that the element of strict enforcement and strict regulation in the existing solid waste management system in Kota Kinabalu are found to be less strict.

Based on the previous studies, weak regulation may affect the overall solid waste management system as it contributes towards many issues of solid waste such as the increased activity of illegal waste dumping, environmental pollution, and unsystematic solid waste management system. In the first section, it will discuss the findings regarding the element of strict enforcement under the aspect of strong regulation. As mentioned earlier, strict enforcement refers to the ability of the government especially the local government to strictly enforce solid waste management regulation. Based on the overall findings, the study found that the enforcement of solid waste management law in Kota Kinabalu is still considered as less strict. This is reflected when the overall findings collected from the secondary data and interviews found that the existing solid waste management enforcement



in Kota Kinabalu is still considered as less strict (see Table 1). In addition, the findings are also supported by the findings collected from the questionnaires. Based on Table 2, the majority of the respondents perceived the enforcement of laws relating to solid waste management in Kota Kinabalu as less strict.

Moreover, the overall findings of the study are consistent with the previous studies, where the previous studies demonstrated that in Kota Kinabalu, the local government still has to face many challenges in enforcing laws that are relevant to solid waste management. As an example, in Kota Kinabalu, the local government still faces many challenges in enforcing the Anti-litter by-law. This is indirectly reflected when the issue of indiscriminate dumping is still persisted in Kota Kinabalu [39]. The main findings also show that the lack of adequate enforcement personnel has also contributed to the poor enforcement in Kota Kinabalu. In fact, according to Goh Ban Lee (2007), in general, the lack of adequate enforcement personnel is considered as the main contributing factor towards the poor enforcement of solid waste laws in Malaysia. This is further exacerbated when the local government in Malaysia is not only responsible for handling matter pertaining to solid waste management [26]. This is because apart from managing the aspect of solid waste, the local government has other responsibilities such as managing the aspect which relates to environmental protection and building control, maintaining public amenities, social functions, and town planning and control [26]. Therefore, since the local government has various responsibilities, the local government may be unable to focus merely on enforcing laws that are relevant to solid waste management, since they also need to enforce other laws that are not related to the aspect of solid waste management. Hence, this indirectly contributes to the less strict enforcement.

The lack of strict enforcement in Kota Kinabalu has indirectly contributed towards the issues of solid waste management system in Kota Kinabalu. This is because the previous studies have shown that the public will not respect laws that are not being implemented strictly and may tend not to obey the laws. As an example, this study suggests that although there are existing laws such as Anti-Litter Bylaws 2005 in Kota Kinabalu to address the problem of littering, the lack of strict enforcement in Kota Kinabalu contributes to the ineffectiveness of the laws to address such issues. As a result, it contributes towards various solid waste issues in the Kota Kinabalu city such as indiscriminate waste dumping, unsystematic solid waste management system and environmental pollution. Moreover, it also leads to various problems such as leachate, blocked manholes, and drain in the city. In fact, according to Mr. Robert Lipon who is the Health and Environmental Services Department Director of Kota Kinabalu City Hall, the indiscriminate dumping in the Kota Kinabalu city may not only cause an eyesore but it also attracts pests, rodents, and insect that can transmit diseases [40].

Furthermore, based on the main findings, the solid waste management laws in Kota Kinabalu is considered as less strict when the study found that the local government in Kota Kinabalu is not being strict in enforcing laws related to solid waste management. As an example, based on the findings collected from the interviews, as of 2016 the local government in Kota Kinabalu has never taken any court action to those who have violated the Kota Kinabalu Municipal Council (Anti-litter) By-laws, 1984 and Kota Kinabalu Municipal Council (Conservancy and Hygiene) By-laws, 1984 ever since it was established. This indirectly shows the local government in Kota Kinabalu is not strict in enforcing the laws. In fact, according to Chua and Haijon (2012), enforcing the Anti-litter by-laws in Kota Kinabalu is difficult since the enforcement officers often have to deal with litterers who do not want to cooperate. This is consistent with the previous study, where in general the enforcement culture in Malaysia, especially in the aspect of solid waste management, is still considered as poor [41].



Besides, the element of strict enforcement in the existing solid waste management system in Kota Kinabalu is still considered as less strict when the study found that the local government in Kota Kinabalu is being lenient in enforcing the by-laws. As an example, through the interviews, the study found that the local government in Kota Kinabalu entertained the public request to get their compound to be reduced or waived. However, by giving a discount, this study suggests that it may indirectly send wrong messages to the public as they might perceive local government as being flexible towards enforcing the by-laws. If the by-laws are not being implemented strictly, the people may possibly lose their respect towards the law. In fact, according to Badgie and Muda (2009), the public only tend to respect laws that are strictly executed. Besides, according to Coffey and Coad (2010), strict enforcement will encourage public obedience towards the laws and in the long run, may cultivate positive environmental culture among the public.

In addition, less strict enforcement is indirectly reflected in the existing solid waste management in Kota Kinabalu, particularly in the aspect of scavengers. Although scavenger is not allowed to enter the landfill site, specifically in the area that is hazardous to the public health, the study found that the local government in Kota Kinabalu deliberately allows them to enter the landfill to perform waste picking as they contribute towards the aspect of waste recovery. In fact, this is also supported by the study conducted by Juzhar Jusoh (2000), who pointed out that the majority of the municipal in Malaysia deliberately allows the waste picker or scavenger to enter the landfill, as they contribute to the aspect of waste recovery. This indirectly reflects that the existing solid waste management in Kota Kinabalu lacks the element of strict enforcement. Therefore, based on the overall findings, it can be concluded that the element of strict enforcement in Kota Kinabalu solid waste management system is still considered less strict.

In short, the poor enforcement of the existing solid waste management laws in Kota Kinabalu contributes to the various negative environmental effects in the city.

The previous section has discussed the findings regarding the element of strict enforcement, while the following section will discuss the findings regarding the second element under the aspect of strong regulation known as strict regulation. Based on the overall findings, the study found that the element of strict regulation in the existing solid waste management system in Kota Kinabalu is still considered as less strict.

This is indirectly reflected in the findings collected from the secondary data and interviews, when the findings show that there is still a lack of strict regulations to cover the entire aspect of waste minimisation in Kota Kinabalu. As an example, there is still no mandatory law developed in the aspect of waste recycling, waste separation and waste composting in Kota Kinabalu. Moreover, the findings collected from the secondary data and interviews are also supported by the findings collected from the questionnaires, where the majority of the respondents perceived the level of strict regulation in Kota Kinabalu as less strict. This finding indirectly indicates that the element of strict regulation in Kota Kinabalu is considered as less strict.

Moreover, the overall findings of the study are consistent with the previous studies. According to Fatma Sabariah et al. (2013), in Sabah, there is still a lack of mandatory law developed pertaining to waste separation. Hence, the local government in Sabah is unable to force the public to segregate their waste. The lack of mandatory laws developed pertaining to the aspect of waste separation indirectly indicates the existing solid waste laws in Kota Kinabalu is considered as less strict. Without enforceable law, policy implementation becomes difficult and may not be successful. Sakawi (2011) claimed that to ensure more effective



implementation of municipal solid waste management (MSWM), it is important for the government to introduce mandatory laws pertaining to its solid waste generation, collection, treatment and disposal. In addition, he also claimed that fines not only need to be imposed to those who violated the laws but should also be implemented with integrity and persistence.

The lack of strict solid waste management regulation in most developing countries contributes towards the poor solid waste management system. According to Thapa (1998), the lack of mandatory laws in environmental conservation and management makes it difficult for the developing cities like the capital city of Nepal, Kathmandu to achieve any of its policy objectives. Apart from that, Zuilen (2006) also pointed out that the lack of monetary penalties will contribute towards the low participation of the public in addressing the solid waste issues. In fact, the existence of strict monetary penalties is the key strategy used by the Singapore to address their solid waste issues.

Furthermore, this study suggests that the growing number of waste generation in Kota Kinabalu may be indirectly contributed by the lack of strict regulation in Kota Kinabalu, since there is an absence of strict laws to control the waste generation from the point of generation. The results are broadly consistent with the study conducted by Muttamara et al. (1994), where their study has found that the lack of the element of strict regulation in the aspect of waste recycling in the major city in Thailand is the main contributing factor towards the poor implementation of the activity of waste recycling in the city. Likewise, Pokhrel and Viraraghavan (2005), found that the issues of illegal waste dumping in the developing country like Nepal are highly contributed by the lack of stricter regulation introduced by its government.

Due to the lack of stricter regulations in the aspect of waste prevention and waste reduction in Kota Kinabalu, it may indirectly contribute towards the increasing number of waste sent to the landfill in Kayu Madang and reduces its lifespan. In contrast to other developed countries, the existence of stricter regulation to control their waste from the point of generation has significantly contributed towards their sustainable solid waste management system (MHLG, 2006). Additionally, in most of the developed countries like in the Europe, the introduction of stricter regulations on the category of waste that can be disposed at the landfill has significantly contributed towards the increase of waste recycling and waste recovery (Defra, 2007).

Therefore, to ensure more sustainable solid waste management in Kota Kinabalu, it is important for the government to develop a stricter regulation regarding their solid waste management. In fact, the introduction of mandatory waste separation in the West Malaysia indirectly shows that a stricter regulation specifically in the aspect of waste separation is important towards a sustainable solid waste management in Malaysia. Apart from that, the lack of stricter regulation in the aspect of waste minimization in Kota Kinabalu may indirectly demonstrate the solid waste management policy in Kota Kinabalu as incomprehensive. This is because based on the concepts of waste management hierarchy, the aspect of waste minimization is considered one of its main elements. Failure to emphasize on this aspect demonstrates incomprehensiveness in the policy. Therefore, the element of strict regulation in Kota Kinabalu is still considered as less strict.



## 7. Conclusion

Based on the overall findings, the study suggests that the existing solid waste management in Kota Kinabalu may not be sustainable as the overall findings show that the aspect of strong regulation in Kota Kinabalu is still considered as weak. This is reflected when the study found that the element of strict enforcement and strict regulation under the aspect of strict regulation are less strict. Therefore, to achieve a sustainable solid waste management system from the perspective of strong regulation, it is important for the local government to ensure stricter enforcement as well as introduce stricter regulation pertaining to its solid waste management.

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## **Tourists' Tourism Experiences and Their Revisit Intentions to Skyrides Festivals Park, Putrajaya**

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### **Abstract**

Tourism industry is an important economic generating income for a country. Theme parks are one of the tourism products that motivate people to travel to a particular destination and one of the important generators in tourism demand. This study aims to examine the relationship linking tourists' memorable tourism experience attributes and their revisit intentions to theme parks. Using convenience sampling, a total of 370 survey questionnaires were distributed to respondents after their visit to Skyrides Festivals Park in Putrajaya, and the data were used for data analysis. Regression results revealed that three Memorable Tourism Experience attributes have significant relationships with tourists' revisit intention. They are meaningfulness experience, novelty experience and refreshing experience. Of these three attributes, novelty proves to have the most significant impact on tourists' revisit intentions.

**Keywords:** Tourism Experience, Theme Park, Memorable Tourism Experience, Revisit Intentions.

### **1. Introduction**

Tourism has become common in this modern era. It comprises activities of persons travelling to, and staying in, places outside their usual environment for not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity remunerated from within the place visited. Jurowski, Uysal, and Williams (1997) believe that tourism sector can bring good impacts in terms of economy such as job creation, income growth, infrastructure development and increase the standard of living (social).

Theme parks have become one of tourism products that have unique concepts that attract and give visitors a totally different experience (Ulvoas, 2016). The Skyrides Festivals Park in Malaysia is an iconic symbol of Putrajaya's entertainment centre. Skyrides Festivals Park is the first festival park of its kind offering unique experiences and attractions such as Sky Warrior Rainforest Challenge, Skyridess Balloon, SkyStage, SkyTaste, SkyGallery, SkyDemo, SkyKids and SkyKids Warrior. Unique travel experiences and activities of a destination can influence a traveller's decision to visit the destination (Cerutti & Piva, 2016). Researchers have looked into theme park development including various factors that bring success to the theme park attraction (Pikkemaat & Schuckert, 2007). As stated by Yooshik and Muzafer (2003), satisfaction and pleasant experience with the theme park are usually believed to build their loyalty behavior to the park.



Memorable Tourism Experience (MTE) is the rational factor that affects the future behaviour as the need to enhance customer's experience that influences tourist revisits intentions as stated by Kim et al. (2012). Thus, people tend to memorise their previous experience first when it comes to determining destination area and searching for information for travel (Raju & Reilly, 1979). As stated by Kerstetter and Cho (2004), remembered experiences are great predictors of a person's fascination to have the same destination in the future. Most of the previous research on MTE has focused on cross-cultural validation of a Memorable Tourism Experience Scale (Kim & Ritchie, 2014), cross-cultural comparison of MTE (Mahdzar & Shuib, 2016) and development of a scale to measure MTE (Kim, McCormick & Ritchie, 2012). Other studies have looked on exploring the essence of MTE (Ritchie & Tung, 2011) and effects of MTE to destination competitiveness (Akkus & Gulluce, 2016). As stated by Qu (2017), there are specific elements of tourism experiences that influence a person to memorise memories as well as taken these memories into consideration in creating memorable tourism experience. MTE is the rational factor that also impacts the future behaviour i.e. their revisit intentions to a destination. However, specific studies of MTE focusing on Malaysian theme parks are still limited as previous research only looked into several aspects of tourism experience in other attractions such as national parks and museums. Thus, this paper emphasised on the relationship between Tourists' MTE and their revisit intentions to a theme park in Putrajaya.

## **2. Literature Review**

### **2.1 Memorable Tourism Experiences (MTE)**

MTE or Memorable Tourism Experience is defined as "a tourism experience that gives positive feedback to remember and recalled after the activity has happened". According to Kim, Ritchie and McCormick (2012), the only mechanisms of the tourism experience that strongly affect individuals and lead to memorability should be taken into thought in abstracting an MTE. According to Kim and Ritchie (2014), there are seven dimensions of MTE which are hedonism, involvement, meaningfulness, refreshment, knowledge, novelty and social interaction that can influence tourists to revisit intention.

Tourists mostly try to find enjoyment while gaining experiences. Thus, the first element of MTE is hedonism; experiences that are popular and contribute to the tourism product. For example, Tung and Ritchie (2011) found that good emotions and feelings are related to happiness and excitement which explain the essence of MTE. The second element is involvement experience that refers to when tourists begin to be involved, while actively participating in tourism activities. Pine and Gilmore (1999) suggested that when the travellers are encouraged to participate, the MTE would be delivered affectively. They noted that customers are more likely to have a memorable experience when they find themselves engaged in the programs. The third element, meaningful experience, is defined as having meaningful experiences within their travel and tourism activities such as finding a sense of physical, emotional or spiritual fulfilment through tourism rather than going after simple escapism or a hollow search for authenticity (Callanan & Thomas 2005; Digance, 2003; Noy, 2004). Since tourists are wiser today, they are more likely to seek unique and meaningful travel experiences that will satisfy their needs and wants. The next element which is refreshment or relaxation is best described as the basic component of tourism activities. For example, Boo and Jones (2009), Lscerblanc (2003), Pearce and Lee (2005), Richards (2002), and Snepenger et al. (2007) supported the importance of escapism by discovering that rest, relaxation, and recuperation are the major motivations of travellers who attend special events and festivals. The other element, knowledge experience, is stated as travellers' intention to learn new things, and develop new insights and skills that could lead them having good memorable experience when travelling. Tung and Ritchie (2011) found that the intelligent



growth is one of the most important elements in MTE. Many respondents indicated that tourist gaining new knowledge about the destinations they visited as part of the most memorable tourism experiences. According to the respondents, the most memorable experiences they gained include new knowledge about the destination they had visited. The other element of MTE is novelty that is derived from experiencing something new (e.g., culture, food, and accommodation) and encountering different styles of a tour (Chandralal and Valenzuela, 2013); and this is an important component of MTE. Finally, social interaction element in experiencing local culture is also considered as a significant motivational element for travelling. For example, knowing local culture by learning the local people's way of life and the local language, significantly improve MTE (Tung & Ritchie, 2011). This study is supported by Chandralal and Valenzuela (2013) who noted that when travellers experience the real local life, cultures and local foods, the experience will be unforgettable.

## **2.1 Tourist Revisit Intention**

Chen and Tsai (2007) stated that a tourist tends to choose a destination to visit and make subsequent evaluations that will lead to future revisit intentions. The following assessments are based on the travel experience; recognise the value and comprehensive visitor's satisfaction. Several studies showed that satisfaction of memorable experience as the major reason of revisit intention (Oppermann, 2000; Baker & Crompton, 2000; Kozak, 2001; Jang & Feng, 2007; Alexandris, Kouthouris & Meligdis, 2006; Chi & Qu, 2008, Mahdzar & Shuib, 2016). Tourist revisit intention has been considered as an extension of satisfaction (Um, Chon, & Ro, 2006). The study stated that past tourism experience and memory that they faced affect the behavioural intentions in the future. It is also affirmed that memorable tourism experiences are usually believed to influence tourists' satisfaction and their revisit intentions.

## **3. Methodology**

This study employed the use of a descriptive research design using a quantitative approach through cross-sectional study. The sample populations were among tourists who had experienced the Skyrides Festival Park, Putrajaya. The sample size for this study was 370 respondents which adhered to Krejcie and Morgan's (1970) determination of sample size. Data were collected using a questionnaire that included 24 items that assess tourists' MTE and their revisit intentions. 370 questionnaires were distributed to tourists after they had experienced the activities and attractions in Skyrides Festivals Park, Putrajaya, and the data were used for further analysis. Questionnaire items were adapted from Kim and Ritchie (2014) as well as Mahdzar and Shuib (2016).

## **4. Findings**

### **4.1 Respondents Profile**

Through the frequency test, the locals (Malaysians) constituted 39.2 per cent (n=145) of the respondents as opposed to foreigners from China 56.8 per cent (n=210), United Arab Emirates 0.8 per cent (n=3), Singapore 2.2 per cent (n=8), Canada 0.5 per cent (n=2) and Japan 0.5 per cent (n=2). In regards to age group, 53.3 per cent of the respondents belonged in the 21-40-year-old age group, 35.7 per cent aged below 20 years old, and 14.1 per cent aged 41



years and above. The majority of the respondents were females 60.5 per cent, while the males constituted 39.5 per cent.

#### 4.2 Descriptive Statistics

The study shows the perception towards MTE in general (Table 1). These sections contain 24 questions that were asked to the 370 respondents. Mean indicates the average answered among respondents and standard deviation (S.D) indicates how close the data is to the mean.

**Table 1: Mean Score and Standard Deviation**

Construct	Indicator	Mean	S.D
MTE	Thrilled having a new experience	3.60	1.118
	Indulged in activities	3.75	1.102
	Exciting experience	3.50	1.237
	Enjoyed tourism experience	3.87	.944
	Once-in-a lifetime	3.82	1.111
	Unique experience	3.86	.953
	Different kind of experience	3.82	1.061
	Experienced something new	3.79	1.039
	Received a good impression	3.64	1.204
	Experienced local culture	3.65	1.161
	Locals were friendly	4.05	.959
	Enjoyed the environment	4.08	.856
	Theme park help me refreshing	3.55	1.220
	Restored myself	3.80	1.088
	Did something meaningful	3.82	1.157
	Did something important	3.84	.972
	Learned more about myself	3.96	.995
	Visited place(s) I really wanted to go	3.91	1.121
	Did not willingly to involve activity	2.11	1.100
	Not interested with the main activities	1.89	.981
	A lot of new knowledge	3.92	.971
	Learnt new cultures	3.88	1.008
	Manage to explore more about the other type of	3.88	.967
Revisit Intentions	Willing to visit again	4.19	.981

The table shows recorded mean score between 1.89 to 4.08. The highest mean is 4.08 (SD= 0.856) representing the refreshment element of MTE. Meanwhile, the lowest mean comes from the involvement element, an item labelled as not interested with the main activities with a score of 1.89 (SD= 0.981). For the revisit intention, 1 item was measured by Likert scale with 1 representing "Completely Unwilling" to 5 representing "Completely Willing". Table 1 shows that the mean is 4.19 (SD= 0.981) which proves most respondents are completely willing to revisit Skyrides Park in the future. It can be concluded that the total mean and



standard deviation for items of MTE factors (Hedonism, Involvement, Meaningfulness, Refreshment, Knowledge, Novelty & Social Interaction) have a mean that leans towards the level of agree (4), while “Completely Willing” towards post behavioural intention.

#### 4.3 The relationship between MTE and tourists’ revisit intention

To see whether there is a significant relationship between tourists’ MTE and their revisit intentions to Putrajaya Skyrides Festivals Park, a single step multiple regression was conducted. The 23 items in independent (MTE) dimension and 1 item in the dependent dimension (revisit intention) were collapsed and entered into the equation. The outcomes demonstrated that there is a significant relationship between tourists’ MTE and revisit intentions. The tourists’ MTE was able to explain 35.8% ( $R^2=0.358$ ,  $F - \text{change} = 28.874$ ,  $p < 0.000$ ) of the variance in revisit Intentions to Putrajaya Skyrides Festivals Park. It evidently shows that tourists’ perception of MTE was found to significantly and positively influence their revisit intentions; thus, the hypothesis is manifestly supported. Besides that, Table 2 shows the value of Beta Coefficient for this study. Pallant (2005) stated that beta coefficient indicates which variable(s) are important to the model by looking at the largest value while ignoring the negative signs. This study suggests that among the factors of MTE, novelty experience (0.573) is the strongest influence on revisit intention, followed by meaningfulness experience (0.164) and refreshing experience (0.114). However, other factors of MTE such as hedonism, local culture, involvement and knowledge experience have statistically insignificant relationship towards revisit intention.

**Table 2: Coefficient Revisit Intention**

Model	B	t	Sig.
Constant		5.065	.000
Hedonism	0.034	0.681	.497
Novelty	0.573	7.311	.000
Local culture	0.014	0.298	.766
Refreshing	0.114	2.277	.023
Meaningfulness	0.164	3.374	.001
Involvement	0.068	1.560	.120
Knowledge	0.015	0.191	.849
<b>Dependent Variable: Revisit Intention</b>			

#### 5.0 Conclusion

The results from this study show that the most important experience felt by respondents while visiting this attraction is the novelty element, while the least important factor is the refreshing experience. The majority of the respondents also agree to the revisit intention towards this theme park in the future. The results have shown that the independent variable, tourists’ memorable tourism experiences have significant influence on revisit intention. Among all the MTE attributes, novelty has the strongest impact on revisit intention followed by meaningfulness and refreshing experience. The result of this study is consistent with studies by Qu (2017) and Som et. al. (2012) which stated that novelty experience is the main reason for revisit intention and considered as an encouragement for tourist’s satisfaction in tourism.



This research offers advantages and insights to tourism marketers and officials in improving the quality of services in their attractions and concentrating on the experiential factors that affect their customer behaviour intentions to the theme park. It is proven that tourists' memorable tourism experience is very important in encouraging tourist intention to revisit the places. Thus, theme park operators and marketers can provide more facilities and amenities, as well as quality service that can enhance tourist experiences such as unique rides and refreshment while they are at the park.

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## **An Evaluation of Learners' Level of Satisfaction using MOOC: Satisfied or Unsatisfied?**

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### **Abstract**

Massive Open Online Course or MOOC has been blooming and most universities are offering MOOCs so as to remain relevant with the current education trend. MOOC is one of the most recent innovations in education that offers a lifelong learning opportunity and free short online courses available to anyone in the world. The current study aims to investigate the learners' perception and satisfaction level on the use of instructional design of MOOCs using a quantitative research design. The study was based on a survey questionnaire which was carried out randomly to 68 Diploma learners of UiTM Perak Branch. In addition, comments and suggestions from the participants were also analysed. The results revealed that the majority of the learners had high level of satisfaction in using MOOCs. The learners were found to be receptive given that the courses were free, interactive and easily accessible. The most appealing aspects that contributed towards the satisfaction level were teaching methods and the learning environment, whereas the least was on the assessment aspect. However, the learners also shared their concern as part of their suggestions on the issue of improvising the connectivity as well as timely feedback by the instructors. It is hoped that the findings of this study would be beneficial for future offerings of MOOCs which could incorporate these suggestions to improvise learning experiences and learners' satisfaction.

**Keywords:** Evaluation of MOOCs, Satisfaction of Using MOOCs, MOOC



## 1. Introduction

Access to education has never been greater with a plethora of innovations in education. One of the recent innovations is the open source learning system which offers online education courses. As opposed to distance learning or online courses which are commercial in nature, an open source learning system is provided for free for anyone who has a keen desire to learn. Atenas (2015) makes the point that as "taxpayers are funding the development of these open learning systems, access to the resources should be considered a right for all citizens who are interested in increasing their knowledge and improving their skills" (p. 10). Some of the more popular open source learning systems are *Open Study* and *Khan Academy*. Currently, Massive Online Open Course (MOOC) Portal has started to gain relevance in this exciting world of open source learning system.

MOOC is defined as "online courses designed for a large number of participants, which can be accessed by anyone and anywhere as long as they have an Internet connection, MOOCs are open to everyone and MOOCs offer a full/complete course experience online for free" (Jansen & Schuwer, 2015, p. 4). In addition, they generally have no prerequisites, fees, formal accreditation or predefined required level of participation (McAuley, Stewart, Siemens & Cormier, 2010). It has been predicted by some that the introduction of MOOCs will change the nature of traditional elite universities from being establishments for the affluent and privileged few to becoming free, accessible, and for virtually everybody and anywhere (Ryan, 2013). Apart from that, Liyanagunawardena, Williams and Adams (2013), and Yousef, Chatti and Schroeder (2014) also suggested that MOOCs were hailed by many as a solution for the developing world's lack of access to education because MOOCs could provide learning opportunities to a massive number of learners from anywhere in the world as long as they could access the courses through the Internet. The first official MOOC started in the year of 2008. It is believed that this MOOC scenario has yet to peak (Chiam, 2018). In Malaysia itself, the Ministry of Education has made MOOCs as its priority agenda under Surge 9: Globalised Online Learning under the Malaysian Education Development Plan (Higher Education, 2015-2025). Although MOOCs were claimed to be beneficial, several unprecedented challenges still existed which most of E-learning possesses such as lack of interaction and supervision, imperfection of grading assessment (Pappano, 2012), plagiarism in online education (Cooper & Sahami, 2013) and quality of peer assessment (Yin, 2016). This has raised concerns which led towards this study since MOOCs development in Malaysia is still considered as very recent. Also, academic research in using MOOCs are still lacking in Malaysian context.

Therefore, the current study seeks to investigate Malaysian learners' perception of the instructional design of MOOCs that interpret their satisfaction and experience using the platform. The following research questions are addressed in this study:

1. How satisfied are UiTM learners with the instructional design of MOOCs?
2. Which aspects of MOOCs contribute the most and the least to learners' satisfaction?



## 2. Literature Review

### 2.1 Development and Controversial Issues of MOOCs

Baturey (2014) in his research found out that Massive Open Online Courses (MOOCs) were one of the most protuberant movements in higher education in the past years. It represents open access, global, free, video-based instructional content, problem sets and forums released through an online platform to a large number of participants aiming to take courses or to be educated. With time and place flexibility, MOOCs gather scholars and learners around the world. MOOCs are the latest movement in the field of distance education that seems to go on for some time which specifies a noteworthy need of research studies on it. In the Malaysian setting, MOOCs started to make an appearance back in 2013, with only one private university offering a course on entrepreneurship, and later in 2014, four public universities began offering MOOCs too (Fadzil, Latif & Munira, 2015). From there on, more and more higher educational settings began to realise that it was only relevant that higher education institutions in Malaysia, in time, must learn to familiarise and be more pioneering in the world of information and technology in order to avoid the risk to be left behind and eventually being irrelevant in the long run.

As far as the higher education is concerned, many of the higher education settings have recently utilised the advancement of educational tools to be in line with educational aspirations. There were mixed opinions on the execution of MOOCs in the higher education setting. Jurenas (2014) described MOOC as a means of online education that offers great availability and laidback, that encouraged the participation of learners as well as gave the opportunity of learning throughout one's lifetime with no or minimal cost. Apart from the hassle-free enrolment, respondents also participated in MOOCs due to their development of specific skills as well as personal skills which were in line with Malca's (2015) claim. Additionally, a study by Ng (2012) also suggested that MOOCs have become one of the platforms for knowledge transfer which include feasible methods and techniques for learners to adapt and this also supports Beetham's (2007) claim which MOOCs provide a helpful, collaborative and accommodating learning atmosphere and is useful for learners to achieve a positive learning environment and experience.

Although MOOCs were claimed to be beneficial, several unprecedented challenges still existed like most E-learning face such as lack of interaction and supervision, assessment grading errors (Pappano, 2012), plagiarism in online education (Cooper & Sahami, 2013) and quality of peer-reviewed assessment (Yu, 2016). In Malaysia for example, Amantha and Al-Samarrie (2018) found that the controversial issues faced by instructors when using MOOCs were dismissal, lack of amenities and experience, lack of knowledge in MOOC designs and progress, and inadequate control and capacity-building programmes. There were also other negative opinions that question the sustainability of MOOCs and their position in higher education (Yin, 2016) as well as the chances of MOOCs posing a threat to the existing models (Wiley, 2012). Even though MOOCs have been the topic of many controversial discussions, many researchers still hold their belief that online education has never been a threat to the education spectrum. It is believed to be an infusion or alternative platform which replaces the conventional form of education. It has never been the intention of MOOCs to replace the interactions or activities in conventional education but somehow to offer varieties of opportunities and experiences to learners with the support of technology (Ng, 2012). With the rapid development of technology, learning today has become a life-long process which makes people obtain knowledge more effectively. Taking into consideration all controversial issues and arguments, there is no doubt that MOOCs still face huge challenges in the future. However, there are also massive opportunities to be weighed



ahead. With this, the institutes, universities and government should collaborate and work hand in hand to resolve the difficulties and challenges that MOOCs present.

## **2.2 Implications to Higher Education**

MOOC is known to be a new pedagogic tool that goes beyond traditional teaching in which most of the higher educational settings have been practising for decades. It can be said that educators are worried if MOOCs can actually replace the traditional teaching and learning and eventually affect the whole man-power issue of higher educational institutions (HEIs) (Li & Stephen, 2013). However, Dennis (2012) reassured that MOOCs would not substitute HEIs. In fact, they would only complement rather than substitute. This is due to their ability to solve issues faced by the higher education such as unsustainable costs, unmanageable student debts and college participation rates. Additionally, it is also worrying that MOOCs were created to cater to the need to supply the knowledge to the users rather than to cater to the demand of the users themselves since higher education settings are running after the new market created by the MOOC platform which in time contributes to the increasing number of students (Li & Stephen, 2013). MOOCs also do not really offer validated credentials which is the main reason why students are not attracted to enrol since they want to look for courses that are backed by the institutions (Daniel, 2016). Literat (2015) in a more positive note agreed that MOOCs create new openings for innovation in higher education which substantially permits the higher education institutions as well as academicians to discover new online learning models and advanced practices in teaching and learning. MOOCs have also turned into the newest in-thing in the world of distance education which signals a profoundly important need of studies to be done to lessen the threat related to them (Literat, 2015). According to Li, Sun and Sun (2018), MOOCs have definitely helped HEIs in the United States to provide more learning opportunities with their availability, minimal cost and easy-access criteria. Aside from bringing trials to higher education, they also offer supervision for the conventional education in higher education and encourage the new experience of teaching methods in HEIs, (Li, et al., 2018). These implications of MOOCs were derived from the experience of the MOOC educators around the globe, and there are some of these issues that are still worthy to be explored if MOOCs are ready to take the centre stage of our educational system be it in Malaysia or anywhere else respectively.

## **2.3 Satisfaction vs Dissatisfaction of MOOC**

Among the challenges that were raised during the initial development of MOOCs were whether there would be issues on the reliability and effectiveness of the MOOCs and whether participants would be satisfied with the implementation and outcomes derived from the programme. Participants' satisfaction is one of the key points to ensure that the effectiveness of MOOCs is achieved. Khalil and Ebner's (2013) research work explored the importance and satisfaction on the level of interaction in MOOCs as perceived by learners and instructors which was based on data from online students and instructors of MOOCs. Findings of the survey revealed that students rated the importance of interactions in MOOCs as highly important. In addition, the study revealed that students and instructors reported a high level of satisfaction in MOOCs. This was also supported by Bozkurt and Aydin (2015) who revealed that MOOCers were satisfied with their MOOC experience and had positive



feedbacks regarding MOOCs. They also planned to participate in other MOOCs in the near future and it proved that MOOC hype would go on for some time.

In contrast, some students expressed less satisfaction in terms of interaction because of the lack of instructor's interaction. Khalil and Ebner (2013) found that it was impossible for the instructors to interact with quite a large number of MOOC participants but the researchers suggested that a study should be carried out to assess the importance of instructor-participants interaction as this may give a big impact of the level of satisfaction from the view of both instructors and participants respectively. Additionally, Khalil and Ebner (2013) also suggested that trained teaching assistants were made available to assist the instructors in handling a large number of participants. However, Gameel (2017) in his study found that learner-learner interaction and learner-instructor interaction had no impact on the participants' satisfaction with MOOCs. Instead, the study found out that the participants perceived usefulness, the teaching and learning process in MOOCs, and learner-content interaction were what really contributed to the satisfactory levels of MOOCs. These findings will help us to identify the need to understand the participants' level of satisfaction towards the possibility of implementation of MOOCs in the near future.

### 3. Method

The nature of the study is in quantitative research mode. The findings were mainly collected through responses using a questionnaire. This section includes descriptions of the instruments, the respondents, and data collection and analysis.

#### 3.1 Instruments

An online questionnaire (Google form) was designed to investigate the learners' satisfaction level of the MOOCs that they have enrolled in. The questionnaire included questions which explored part of the MOOCs that contributed the most and the least satisfaction among the learners. The questionnaire was adapted from Yin (2016). The theoretical base of the questionnaire was grounded from the Fundamental Components of Instructional Design of E-Learning programme which was firstly developed by Morrison, Ross, Kalman and Kemp (2011). In this model, Morrison, et al. (2011) offered instructional designs of the e-learning. Yin (2016) adapted the model to suit with the questionnaire which entailed the instructional designs of MOOCs. The questionnaire consisted of three sections. The first section of the questionnaire was related to the demographic information of the respondents. It consisted of seven items. The second section of the questionnaire was about satisfaction of the instructional design of the MOOCs. In this section, there were six parts (A, B, C, D, E and F) with a total of 30 items. Part A included six items on the course content, part B included five items on teaching method, part C included six items on evaluation system, part D included six items on discussion forum, part E included six items on online learning and finally, Part F included one item on the overall satisfaction level of MOOCs. The final section of the questionnaire comprised four items that were open ended questions. The open ended questions were about the strengths and weaknesses of MOOCs, other comments related to the usage of MOOCs and a question on whether the respondents would recommend the use of MOOCs in their learning. The questionnaire used Likert scales to rate the participants'



perception with options such as Strongly Disagree, Disagree, Neutral, Agree or Strongly Agree.

### 3.2 Participants

The link of the online questionnaire (Google Form) was given to the learners who were enrolled in any of the MOOCs before this. The information about the purpose of study was also included together with the questionnaire. A total of 68 learners, who joined the MOOCs for online courses, participated in the study. The respondents were semester 1 Diploma learners from Art and Design Faculty, and Architecture and Planning Faculty of UiTM Perak Branch. There were 27 males and 41 females who completed the survey.

### 3.3 Data Collection and Analysis

The data were stored automatically in the hosted online survey service (Google Form) after submission of the responses. Descriptive data analyses such as frequencies, min and average were conducted using SPSS. The findings were tabulated and displayed using graphs.

## 4. Findings and Discussions

The overall findings and data analysis are presented and discussed based on the research questions.

### 4.1 RQ1: How satisfied are UiTM learners with the instructional design of MOOCs?

Based on the results in Table 1, learners relatively have high levels of satisfaction with the use of MOOCs. When respondents were asked why they chose MOOCs rather than other open online courses, more than 50% of the respondents reported enrolment to be easier and free. They appreciated that the MOOCs were convenient. This is parallel with the claim made by Jurenas (2014), where she described MOOCs as a tool that offers great accessibility, easy and convenient, enhances learner's engagement, and encourages lifelong learning through open availability with low or zero cost. Apart from the hassle-free enrolment, respondents also reported that they participated in MOOCs because of wanting to develop specific skills as well as personal skills which are in line with Malca's (2015) belief. Prior to this study, out of the 68 respondents, a total of 98.5% (n=67) respondents stated agree and strongly agree on the satisfaction level of the overall design of MOOCs. Only 1.5% (n=1) somehow disagreed and claimed otherwise as shown in Table 1 below.

**Table 1: Overall Satisfaction**

	Frequency	Percent
Disagree	1	1.5
Agree	54	79.4
Strongly Agree	13	19.1
Total	68	100

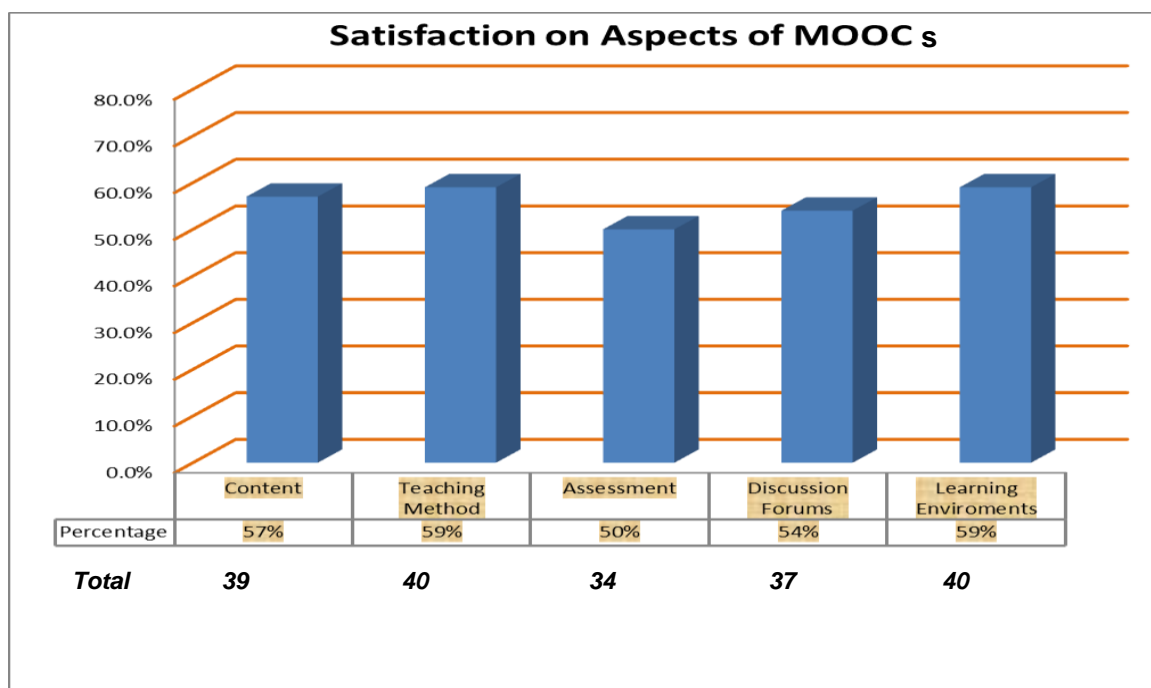
Table 1 shows that most of the Diploma learners were satisfied with the instructional design and quality of MOOCs which they have gone through and experienced throughout their



Diploma studies. Moreover, almost all of the learners commented that they have positive outcomes and experiences using MOOCs as one of their learning platforms. Based on the comments, most of the participants' feedback and reactions regarding their satisfaction levels and perceived learning were positive. For instance, Respondent 48 commented *"I really enjoy the awesome platform, easy to learn and understand...something different from the old school method. Best part is I can also improve my English at the same time"*. A number of respondents liked how the courses were presented. For instance, Respondent 15 commented *"the video available in MOOC makes it easy to understand on certain topics and it is very interesting way to learn"*. Respondent 3 commented *"The best platform so far. I gained more knowledge and it's not boring. I can connect with other friends from different background...very interactive"*. This indicates that MOOCs are considered as a means of providing virtual classroom that offers traditional learners more flexible learning opportunities with greater extent of tools that meet variety of educational demands (Gaebel, 2013). In line with the 'Linux of education', MOOCs have become one of the platforms for delivering knowledge that provides viable methods and techniques for learners to adapt (Andrew Ng, 2012). With this said, 66 respondents agreed to highly recommend this platform to others.

Despite the respondents reporting that they were satisfied with the overall courses, a few recommendations were highlighted in terms of its accessibility as well as timely feedback by the instructors in charge. Due to the limited connection availability on campus, this caused problems for learners to get access to MOOCs. Some of the respondents hoped that the instructors would be able to provide feedback on time and be more engaging. Although MOOCs have been heralded as part of the national agenda that offer meaningful learning, these vital issues must be countered by the institutions, thereby bridging the gap of dropout rates which has been one of the controversial issues among MOOC users.

#### 4.2 RQ2: Aspects Contributing to the Overall MOOCs



**Figure 1: Aspects Contributing the Most and the Least Satisfaction of MOOCs**



Based on Figure 1, the results indicated that teaching methods as well as learning environment contributed the most towards learners' satisfaction with the percentage of 59 (n=40) respectively. The respondents agreed with the content used in MOOCs that projected the criteria of good organisation and structure, rich and plentiful, up-to-date and easy to fit in with their needs which were the strongest predictor for the respondents' satisfaction. Learning environment was also highly rated based on its interface, technical support, interactive lessons and activities as well as handiness of the system. This supports Beetham's (2007, p. 27) claim that "a supportive, interactive and cooperative learning environment is beneficial to learners for obtaining positive learning environment and experience".

The least noted aspect which the respondents rated at 50% (n=34) was on the assessment methods. UiTM learners had significantly lower satisfaction especially on peer assessment. Based on the recent literature review, numerous researchers expressed the same concern about the quality of peer assessment. The low satisfaction of UiTM Diploma learners shows a similar response with Kulkarni et al.'s (2013) study where the research was conducted on the quality of peer assessment. Prior to this, MOOC providers should take into account in implementing concrete measures in improvising the quality of peer assessment (Luo, Robinson and Park, 2014). In addition, further research should be conducted extensively to test its reliability, validity and the effects. Even though the overall findings generally project positive results towards MOOCs, yet there is a need to emphasise the importance of the course design with appropriate format since MOOC development in Malaysia is still considered to be very recent.

## 5. Conclusion

Overall, the learners were satisfied and contented with their learning experiences using MOOCs. The features of MOOCs such as ease, flexibility and convenience permitted them to have a positive learning experience. The strengths of using MOOCs have influenced their interest to learn. The attractive features which were different from the normal traditional classroom learning heightened their interest to learn particularly in using the English language.

Nevertheless, the respondents reported that the process of learning using this medium would be more effective when the Internet access was available and when the lecturer or instructor was able to provide feedback promptly. They reported that the setback was due to the factors mentioned which might affect their motivation and perception to learn.

The majority of the respondents were satisfied with the features available on MOOCs such as the content, discussion forums, flexible teaching methods using video, discussion, and the positive teaching environment. They reported that the features available made the learning fun and attractive. However, they pointed out that they were unsatisfied with the assessments particularly the assessments done with the peers.

The results of the study illustrated that MOOCs might be used not as an alternative to learning but a medium to reinforce learning. The medium of using MOOCs permits students to engage in the learning as the features permit students to explore learning in a more creative and flexible manner rather than the usual convention manner in a classroom. However, the role of the instructor or the lecturer is vital in ensuring that the medium permits



them to monitor and respond to the learners. In addition, the medium should create an avenue for both learners and the instructor to interact throughout the process of teaching and learning. When both parties are able to play their roles well, learning would be able to take place effectively. Learning transcends through time. With the surge of technology, education needs to be aligned to the needs of today. Thus, MOOCs indeed have a place in the education system, and will definitely be a demand in this century.

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## Carbon Dioxide Emission and Developing Countries: A Dynamic Panel Data Analysis

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### Abstract

This study investigates the determinants of carbon dioxide (CO<sub>2</sub>) emissions in selected 126 developing countries based on a dynamic panel data model. It employs the Generalized Method of Moments (GMM) technique and the analysis covers countries situated in Africa, Latin America and the Caribbean, Middle East and North Africa, and Asia and the Pacific region from year 1971 to 2009. The results show per capita gross domestic product, energy usage, energy consumption from fossil fuel-based, foreign direct investment, urbanization, industrial production, agriculture production and education level have significant impact on the growth of carbon emissions. Government in developing countries seems to centralize their focus on energy conservation type of policies to cut carbon emission. The move to emphasize on stringent environmental regulations and energy policies is much needed as to ensure all aspects must be addressed to reduce the carbon emission in the region.

**Keywords:** CO<sub>2</sub>, Developing countries, Dynamic panel data, GMM technique.

### 1. Introduction

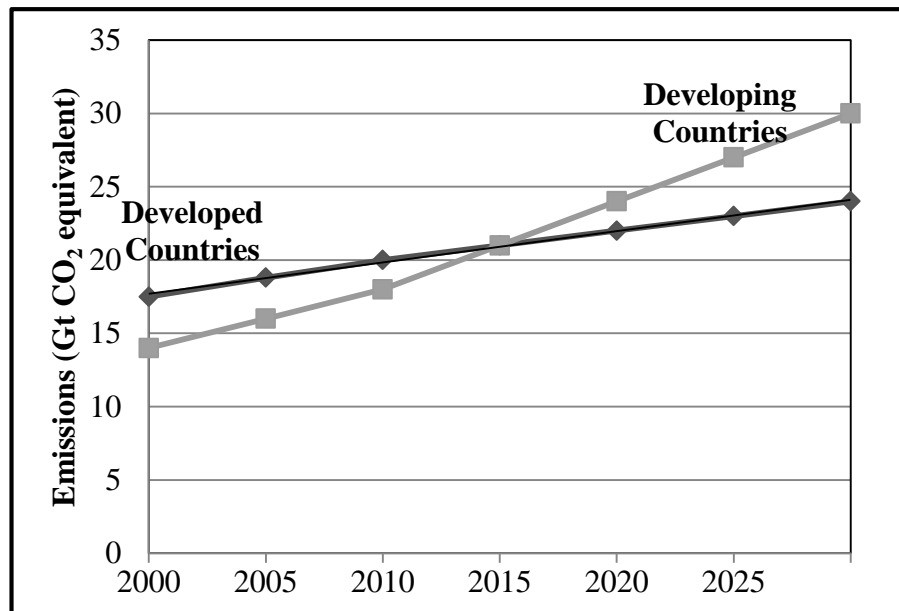
Understanding the needs of developing countries' commitment to meet their social and economic development goals, the Kyoto Protocol established on 11 December 1997 in Kyoto, Japan has the parties agreed to adopt a principle of "common but differentiated responsibilities" for these countries. The reason given is that the share of global per capita emission in developing countries is still relatively low, hence in order to meet their development goals as stated by UNFCCC<sup>1</sup>, the carbon emission is allowed to grow. However, since the year 1991 these nations are responsible for the rapid increase of the world's CO<sub>2</sub> emissions (Fig.1). Being identified to be the next potential largest emitters, the dramatic increase was contributed by their high demand for coal, oil and gas to cater their energy-intensive industrial production. It is even projected the future GHG emissions from these countries are expected to exceed the developed countries by year 2015. Subsequently, it is more significant to focus on these countries since majority of them belongs to the low-income and lower-middle income category and are still in their developing needs. There is also argument regarding their ability

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<sup>1</sup> United Nations Framework Convention on Climate Change (UNFCCC). Background paper for the workshop on reducing emissions from deforestation in developing countries (Part II): Policy approaches and positive incentives. Workshop on reducing emissions from deforestation in developing countries Rome, Italy from 30 August - 1 September 2006.



to worry about climate change due to their heavy dependency on fossil and solid fuels that emit a lot of carbon (Han and Chatterjee, 1997).



**Fig. 1: Total Greenhouse Gas Emissions by Region<sup>2</sup>**

(Source: <http://epa.gov/climatechange/emissions/globalghg.html>)

Essentially, being a signatory of the Kyoto Protocol has also demanded them to put effort in reducing the CO<sub>2</sub> emissions. This is because any effects of climate change are expected to be felt by these countries, the very countries that are least prepared to deal with them. GDP per capita is the most common indicator of a country's economic development and is believed to be the prime variable that affects the level of carbon emissions. In the 1990s, the concept of Environmental Kuznets Curve (EKC) is to investigate the relationship between economic growth measured by GDP and environmental degradation. Empirical studies by Shafik and Bandyopadhyay (1992), Selden and Song (1994), Grossman and Krueger (1995) and Panayotou (2003) centred on examining the relationship between these two variables aiming at either to establish their causal relations, prove its existence or identify the income level at which environmental degradation stabilizes or reaching its turning point.

It is believed that there is simply no single relationship between emissions and economic growth or energy consumption hitherto the evolution of emissions is bound to be dependent on a range of factors which vary according to circumstances. There are studies conducted to examine the relationship within a multivariate framework examining socio-economic variables such as capital stock, labor force, population, government expenditures, consumer prices and international trade that may have impact on the three variables, in particular CO<sub>2</sub> emissions. Variety of empirical techniques is applied by researchers aiming to analyze the sources of emissions growth such as ARDL, VAR and Decomposition methods. Recently, studies have also utilized the Generalized Method of Moments (GMM) technique as the empirical method to examine determinants of CO<sub>2</sub> emissions in the context of a multivariate framework. Since many economic relationships are dynamic in nature, the estimation procedure has evolved

<sup>2</sup>Reference: (1) SGM Energy Modeling Forum EMF-21 Projections, Energy Journal Special Issue, in press, reference case CO<sub>2</sub> projections. (2) Non-CO<sub>2</sub> emissions are from EPA's Global Anthropogenic Emissions of Non-CO<sub>2</sub> Greenhouse Gases 1990-2020.



over the years to better understand the process of adjustment. The GMM technique has profoundly impacted macroeconomic time series studies known to deal with dynamic panel models owing to its essentiality in a variety of applications. Unlike cross-sectional analysis, an advantage of a panel data approach allows control for individual heterogeneity and consequently removes the risks of biased results.

So long there is no concrete evidence on what determines the level of CO<sub>2</sub> emissions, and with the belief that different regions or countries may vary accordingly, this issue will remain open for discussion and it is to the best of our knowledge to explore all possible determinants in order to understand the complex process of the world's climate change. Therefore, the purpose of this study is firstly, to employ a multivariate framework in the context of a dynamic panel data model to investigate the eight factors that determine the level of per capita CO<sub>2</sub> emissions specifically in the developing countries. Several advantages of using a panel data are that it creates a large number of data point, increases the degrees of freedom and reduces the collinearity among explanatory variables of which would improve the efficiency of econometric estimates. Moreover, it allows researchers to analyze economic issues which cannot be addressed using cross-sectional or time series data. Secondly, we purposely include two sets of energy variable i.e. energy usage and energy consumption from fossil fuels in the scenario. Thirdly, this study employs the Arellano and Bond (1991), Arellano and Bover (1995), Blundell and Bond's (2000) GMM estimation which is rather limited in the area. The paper is organized as follows. Section 2 briefly reviews the theory and the empirical literature. Section 3 provides the methodology for the analysis. The main empirical findings are presented and discussed in Section 4. The final section concludes the study.

## 2. Literature Review

The issue on environmental problem was initially presented by two scientists Paul Ehrlich and John Holdren in 1971 by introducing the famous IPAT model. Extensive studies have been conducted linking the model with the socio-economic causes of deterioration in environmental quality in general before Cramer (1998) and York, Rosa and Dietz (2003a, 2003b) starting to give more attention to CO<sub>2</sub> emissions per se. Schmalensee, Stoker and Judson (1997), and Friedl and Getzner (2003) in their works clearly named CO<sub>2</sub> emissions to be the main cause of problem on a global scale. In the 1990s, the research began to focus on the concept of Environmental Kuznets Curve (EKC) to investigate the pattern of the relationship between economic growth or income of a nation and environmental degradation.

The study becomes widespread when energy consumption is identified to be closely linked to economic growth and CO<sub>2</sub> emissions and subsequently becomes a central attention for researches. There are many studies proven empirically on the relationship between economic growth, CO<sub>2</sub> emissions and energy consumption. However, these studies focus much on the causality running among the three variables. Then again, most researchers do not treat and regard fossil fuel energy as one independent variable that determines CO<sub>2</sub> emissions. Theoretical and empirical works have shown evidence of investment to be the key ingredient to promote economic growth for developing economies. Salim, Rafiq and Kamrul Hassan (2008) pointed out the issue that remains unsettled is the question whether economic growth is the cause or effect of energy consumption. Payne (2008) added the need to understand the impact of energy consumption on economic growth is crucial in the formulation of both energy and environmental policies. The various empirical evidences have one common outcome i.e. they have proved to show energy usage is indeed a critical factor in affecting the level of CO<sub>2</sub> emissions. Liu (2005) studied on 24 OECD countries and found that adding energy consumption implies a negative relation between income and CO<sub>2</sub> emissions. This outcome is



supported by Lee and Oh (2006) in their research on 15 APEC countries (categorized into three income groups) who saw that energy intensity did contribute negatively to CO<sub>2</sub> emissions growth in developed countries but positively with developing countries except China.

A more recent research conducted by Aye and Edoja (2017) applying a dynamic panel threshold model found that economic growth has negative effect on CO<sub>2</sub> emission in the low growth regime but positively in the high growth regime. They also discovered that energy consumption and population exert positive and significant effect on CO<sub>2</sub> emission. The latest study by Shuai, Chen, Wu, Zhang and Tan (2019) which somewhat differ, applied a three-step strategy to decouple economic growth from carbon emission aim to investigate the global decoupling statuses of 133 countries as a way to promote low-carbon economy. Using data from 2000 until 2014, their findings showed that higher income-level group has the larger proportion of countries having reached their decoupling statuses. The findings may serve as valuable references to provide national governments, and global organizations with a more scientific basis for effective and targeted policy-making.

However, evidence showed that majority of the studies conducted focus on the unit root and co-integration approaches, and or estimates Granger causality between them. There are single country studies run by Soytaş, Sari and Ewing (2007) on United States, Ang (2007, 2008) on France and Malaysia, and Zhang and Cheng (2009) and Li, Dong, Li, Liang and Yang (2011) on China while for multi-country studies by Liu (2005), Lee and Oh (2006), and Apergis and Payne (2009a, 2009b) showing mixed results of the existence and direction of Granger causality between economic growth, energy consumption and carbon emissions. Payne (2008) though, emphasized the need to understand the impact of energy consumption on economic growth is crucial in the formulation of both energy and environmental policies. The various empirical evidences have one common outcome i.e. they have proved to show energy usage is indeed a critical factor in affecting the level of CO<sub>2</sub> emissions. In this study, the Arellano and Bond's (1991) GMM estimator using a dynamic panel specification of lagged levels of CO<sub>2</sub> emissions would be apply. Study conducted by Martínez-Zarzoso and Bengochea-Morancho (2004), Aldy (2006) and Martínez-Zarzoso, Bengochea-Morancho and Morales-Lage (2007) have proven that pollution-income relationship is a dynamic one and assumed that last year's CO<sub>2</sub> emissions (given as CO<sub>2t-1</sub>) will have an impact on this year's emissions. From the perspective of the developing region that is in need of sustainable growth, if a country emitted large amounts of CO<sub>2</sub> last year, this year's emission is prone to be high too.

It is believed that FDI is less prone to crisis because direct investors are perceived to have a long term perspective when they decide to tie up in a host country. Yanchun (2010) found in her study that FDI inflows have alleviated the pressure of carbon dioxide emissions in China resulting from FDI technology spillover, nevertheless at the same time the use of foreign technology has some extent improved their environmental problems. In the case of urbanization, most cities especially in developing nations are rapidly growing above the national average as endurance workers migrate from rural areas to urban areas in search of better jobs, education, and living standards even into believing it will promise a luxury life (Itoh, 2009; Deng, Huang, Rozelle & Uchida, 2008). It can be observed as population becomes more urbanized, they exert pressure on urban resources and environment leading to more pollution (Kahn & Schwartz, 2008). Hence, the more urbanized the city is the higher the pollution level, meaning a positive relationship is expected between the two variables.



Industrial production is a critical variable to be the main cause of the increase in the level of CO<sub>2</sub> emissions in developed and developing countries. A recent study by Halkos and Tzeremes (2011) included industrial production in their multivariate framework and found a significant positive correlation between industrial production and CO<sub>2</sub> emissions. It is observed that majority of the developing economies still depend on agricultural production to contribute to their GDP growth. Thus, it is not surprising that agricultural sector is reported to be one of the largest sources of CO<sub>2</sub> emissions after energy sector in these countries. In 2005, seventy four percent of total agricultural emissions were mostly contributed by developing countries from rice production and burning of biomass.<sup>3</sup> With this reported statement, a positive correlation between the two variables is anticipated.

Education is a continuous process of learning aiming to enhance one's ability to acquire knowledge, understand the know-how as a way to improve one's well-being. Although empirical studies with regards to the impact of education level on CO<sub>2</sub> emissions per se are rather limited. As Farzin and Bond (2006) argued, educated people are more aware and strongly prefer better environmental quality hence enable them to create a democratically-minded public policymaker and organization that are more receptive to public demands for environmental quality. This is also supported by Bimonte (2002) who found strong positive correlation between the level of education and the demand for environmental amenities. By contrast a recent study by Kinda (2010) on 85 countries suggests that education has no impact on the growth of air pollution in the developing countries but it does matter in the developed countries.

Stern (2004) has expressed concerned on the econometric works that fail to note testing different variables individually is subject to the problem of potential omitted variables bias. Noting this, there are studies conducted to examine the relationship not only among these three core variables CO<sub>2</sub> emissions, economic growth, and energy consumption but to look as well within a multivariate and integrated framework including other economic and socio-economic variables into the study. Alam, Fatima and Butt (2007) have added population and urbanization growth show a positive impact on environmental degradation yet negatively significant to Pakistan economic development in the long run. However, Zhang and Cheng's (2009) study on urban population in China does not show significant impact on carbon emissions. Sharma (2011) included trade openness and urbanization on 69 panels of countries divided into three income panels and found negative impacts on the CO<sub>2</sub> emissions from global perspective.

### **3. Econometric Analysis**

#### **3.1 Preliminary Analysis**

The correlations matrix shown in Table 1 simply measures the degree of association between the variables representing the whole region. It has to be noted that it may differ slightly if one takes into consideration the regions individually. Moreover, any correlation between two variables does not correlate carbon emissions per capita for all the fourteen variables being studied. Ten of the variables show a positive association and only four indicate a negative association. A positive correlation may be interpreted as being where a high (low) per capita GDP is associated with a high (low) level of carbon emissions whereas a negative correlation

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<sup>3</sup> Smith, P., D. Martino, Z. Cai, D. Gwary, H. Janzen, P. Kumar, B. McCarl, S. Ogle, F. O'Mara, C. Rice, B. Scholes, O. Sirotenko, 2007: Agriculture. In Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [B. Metz, O.R. Davidson, P.R. Bosch, R. Dave, L.A. Meyer (eds)], Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.



implies a low Foreign Direct Investment (FDI) is being associated with a high level of carbon emissions and vice versa.

**Table 1: Correlations of variables for the whole region**

	CO <sub>2</sub> per cap	GDP Per cap	EUS	EFF	FDI	URB	IND	AGR	EDU
CO <sub>2</sub> /cap	1.00								
GDP/cap	0.82	1.00							
EUS	0.69	0.34	1.00						
EFF	0.87	0.52	0.74	1.00					
FDI	-0.05	0.12	-0.60	-0.12	1.00				
URB	0.20	0.39	-0.13	0.20	0.29	1.00			
IND	0.51	0.36	0.60	0.63	-0.08	-0.12	1.00		
AGR	0.21	0.18	0.30	0.06	0.02	-0.16	0.11	1.00	
EDU	0.43	0.40	0.75	0.42	-0.55	0.25	0.43	0.28	1.00

Notes: EUS=Energy Usage; EFF=Fossil Fuel Energy; FDI=Foreign Direct Investment; URB=Urbanization; IND=Industrial Production; AGR=Agriculture Production; EDU=Education

A strong positive correlation is found between per capita carbon emissions with three variables, which are, Fossil Fuel Energy (0.8692), GDP per capita (0.8239) and Energy Usage (0.6871). On the other hand, the variable with a negative correlation, FDI, is rather ambiguous since any argument with regards to the variable can be discussed from different perspectives. Nevertheless, the variable shows a rather weak correlation i.e. 0.0525. The second column correlates GDP per capita with thirteen of the variables, excluding carbon emissions. This procedure continues for the rest of the columns and ends when the final variable is marked with a value of one. It must be noted that correlation values only quantify the relationship between two variables. However, to confirm or reject these correlation results, the way is to proceed with a deeper analysis through estimating and investigating the relevant equations employing the chosen GMM estimators and controlling other determinants of per capita carbon emissions before coming to any conclusions.

### 3.2 Empirical Model

A number of variables based on the literature of environmental economics are being considered in this research as possible determinants of carbon dioxide emissions, and subsequently the eight selected variables are GDP per capita, energy usage, fossil fuel energy consumption, foreign direct investment, urbanization, industrial production, agriculture production and level of education. The model begins with the proposed multivariate framework function i.e.:

$$CO_2 = f(GDP, EUS, EFF, FDI, URB, IND, AGR, EDU) \quad (1)$$

where,

- CO<sub>2</sub> = per capita CO<sub>2</sub> emissions (metric tons)
- GDP = per capita GDP (USD\$)
- EUS = per capita total energy consumption
- EFF = fossil fuel energy consumption
- FDI = inflows of foreign direct investment
- URB = urbanization
- IND = industrial sector production
- AGR = agricultural sector production
- EDU = level of education proxy by education attainment for population age 15+



Equation (1) shows that these variables are possible factors which may affect the level of CO<sub>2</sub> emissions. Based on equation (1), the econometric model would be:

$$\ln CO_{2i} = \beta_0 + \beta_1 \ln GDP_{it} + \beta_2 \ln EUS_{it} + \beta_3 \ln EFF_{it} + \beta_4 \ln FDI_{it} + \beta_5 \ln URB_{it} + \beta_6 \ln IND_{it} + \beta_7 \ln AGR_{it} + \beta_8 \ln EDU_{it} + \varepsilon_{it} \quad (2)$$

The dependent variable is CO<sub>2</sub> emissions where  $i$  and  $t$  represent country (126 countries) and time frame (1971-2009) respectively. The variable per capita GDP, EUS and EFF are expected to have a positive effect on carbon dioxide emissions because an increase in EUS catered by EFF leads to more economic activities meaning higher GDP yet end up with higher CO<sub>2</sub> emissions. Similar positive relationship is also expected for FDI, URB, IND and AGR with CO<sub>2</sub> emissions. However, the variable EDU differs in such a way that the higher the level of education of a nation would mean a decrease in CO<sub>2</sub> emissions.

Since the analysis is based on a dynamic panel specification of which lagged levels of CO<sub>2</sub> emissions are taken into consideration, the Arellano and Bond (1991) GMM estimator would be appropriate for the study. Thus, the equation is:

$$\ln CO_{2i} = \beta_0 \ln CO_{2i,t-1} + \beta_1 \ln GDP_{it} + \beta_2 \ln EUS_{it} + \beta_3 \ln EFF_{it} + \beta_4 \ln FDI_{it} + \beta_5 \ln URB_{it} + \beta_6 \ln IND_{it} + \beta_7 \ln AGR_{it} + \beta_8 \ln EDU_{it} + \mu_{it} + \varepsilon_{it} \quad (3)$$

$$i = 1, \dots, N; t = 1, \dots, T$$

where,

$\ln CO_{2i,t-1}$  = natural log of per capita CO<sub>2</sub> emissions of country  $i$  at time  $t-1$

$\beta$  = parameters to be estimated

$\mu$  = country-specific effects

$\varepsilon$  = error term

Applying a dynamic panel specification would cause two problems to arise i.e. firstly, the country-specific effects and secondly, the correlation between the lagged dependent variable and the error term. If one uses the panel ordinary least square (OLS) estimator, it is problematic since the lagged dependent variable is correlated with the error term. Therefore, the appropriate option is to employ the Arellano and Bond estimator basically because the country-specific effects could be eliminated. This is so for the reason that the method first differences the regression model resulting with:  $E(\varepsilon_{it} - \varepsilon_{it-1}) = 0$  but  $(gCO_{2i,t-1} - gCO_{2i,t-2})$  is dependent of  $(\varepsilon_{it} - \varepsilon_{it-1})$ . Due to this, the Arellano and Bond method provides a better solution when one uses two or more lags of the first difference of CO<sub>2</sub> emissions.

However Blundell and Bond (2000) warned that the usage of first-differenced GMM estimator was found to have poor finite sample properties as they are bias and imprecise when the lagged levels of the series are only weakly correlated with subsequent first differences, thus the instruments available for the equations became weak. This will often occur in the case when the variables are highly persistent or show a close to random walk processes and the number of time series observations is small. Bond, Hoeffler and Temple (2001) did a simulation study to prove these features are typically present in empirical growth models of which output is a highly persistent series, and to avoid modeling cyclical dynamics, most growth applications consider only a small number of time periods, usually based on five year averages. Thus, they recommend the usage of a system GMM estimator introduced by Arellano and Bover (1995) and Blundell and Bond (2000) which exploits an assumption about the initial conditions to obtain moment conditions that remain informative even for persistent series.



Arellano and Bover (1995) have developed a framework for efficient instrumental variables (IV) estimators with information in levels which is capable of accommodating models with lagged dependent variables and other predetermined variables. On the other hand, Blundell and Bond (2000) explained using suitable lagged first differences of the variables as instruments for the equations in levels allow both sets of moment conditions be exploited as a linear GMM estimator in a system containing both first-differenced and levels equations. Thus, when both sets of moment conditions are combined, this provides what they call the system (SYS) GMM estimator. They wrapped up their research by advising future growth researchers (i) to preferable use the system GMM estimator rather than the first-differenced estimator in empirical growth work and (ii) researchers who report the standard first-differenced GMM estimates should probably check their results against those of alternative estimators. In the context of carrying out the research on CO<sub>2</sub> emissions, the characteristics described above seem to be apparently similar and could be predicted that the first-differenced GMM estimator will appear to be problematic. Thus, in order to promote a fair insight on the employment of the GMM estimations, the findings extracted from both the first-differenced and the system GMM estimators are illustrated and discussed in the analysis.

### 3.2 Sources of Data

The empirical study is based on data gathered for 126 countries (refer Appendix 1 for the list of countries) covering a time span from 1971-2009. The source of CO<sub>2</sub> emissions data valued in metric tons per capita comes from the Carbon Dioxide Information Analysis Centre, Environmental Sciences Division, Oak Ridge National Laboratory, Tennessee, US. GDP per capita is based on PPP Converted GDP Per Capita (Chain Series), at 2005 constant prices and extracted from Penn World Table version 7.0. Energy usage refers to the usage of primary energy before transformation to other end-use fuels, is measured based on kt of equivalent of which the source is mainly from IEA and WDI. Similarly, data for fossil fuel energy consumption is measured as the percentage of total energy consumption is collected from the same source as energy usage.

FDI is measured by inward FDI flows based on percentage of GDP extracted from UNCTAD. Urban population computed as an annual percentage of urban population growth whilst industrial production valued as a percentage of GDP comprised of value added in mining, manufacturing, construction, electricity, water, and gas. Both data are collected from WDI. Agriculture is measured by the index of agriculture production merely because the data is available for all developing countries. The data is extracted from Food and Agriculture Organization of the United Nations (FAOSTAT). For a standard measurement on the level of education, new data set on educational attainment is utilized (Barro and Lee, 2010).

## 4. Empirical Findings

Before discussing the findings, three aspects worth noting; firstly, the full time period 1971-2009 is corresponding to a five-year average for example 1971-1975, 1976-1980 and so on, basically is a standard procedure to mitigate the persistence in the data. In addition, another advantage of using this five-year average is that it helps to control measures for the average years of schooling, which are only available in this periodical manner. Secondly, the results presented will exploit the first-difference-GMM and system-GMM robust approaches. Thirdly, the choice of estimating using alternative GMM methods is essential to have a more realistic, appropriate, efficient and feasible discussion of the outcomes.



Table 2 portrays the estimates for the eight determinants based on equation (3). The appropriate optimal lag period is determined based on the standardized average residuals autocovariance introduced by Arellano and Bond (1991) that is termed as  $m_j$  statistics where  $j$  is the order of autocorrelation with asymptotically  $N(0, 1)$  distributed under the null hypothesis of no autocorrelation. The reported first-differenced and system GMM estimates have treated per capita GDP, total energy usage and fossil fuels energy consumption rates (i.e. lagged values of the variables in levels) as potentially endogenous variables and the rest of the variables (i.e. FDI, URB, IND, AGR and EDU) to be strictly exogenous.

**Table 2: Effect of socioeconomic factors on per capita CO<sub>2</sub> emissions**

Log of carbon dioxide per capita emissions	GMM 1-DIF (1)	GMM 2-DIF (2)	GMM 1- SYS (3)	GMM 2- SYS (4)
Log of CO <sub>2t-1</sub>	0.245*** (3.24)	0.238*** (10.11)	0.651*** (5.92)	0.642*** (39.46)
Log of GDP/cap	-0.137 (-0.63)	0.096 (0.94)	0.284** (2.43)	0.271*** (14.30)
Log of EUS	0.462* (1.88)	0.471*** (3.99)	0.031 (0.88)	0.023** (2.03)
Log of EFF	0.788** (2.40)	0.716*** (5.35)	0.264*** (4.06)	0.261*** (13.95)
Log of FDI	0.011 (1.30)	0.009* (1.87)	0.035*** (3.39)	0.351*** (12.91)
Log of URB	0.081 (0.42)	-0.004 (-0.03)	-0.136** (-2.47)	-0.114*** (-5.04)
Log of IND	0.130 (0.85)	0.143** (2.20)	0.092 (0.78)	0.139*** (4.38)
Log of AGR	-0.103 (-1.01)	0.004 (0.09)	0.162** (2.28)	0.179*** (7.79)
Log of EDU	-0.119 (-0.83)	-0.147*** (-2.76)	0.041 (0.65)	0.068*** (2.95)
Year Dummy	-0.007 (-0.19)	-0.027** (-1.96)	-0.054*** (-3.03)	-0.056*** (-21.25)
No. of observations	314	314	394	394
No. of countries	66	66	68	68
$m_1$ -test	0.012	0.008	0.033	0.009
$m_2$ -test	0.339	0.723	0.440	0.476
Hansen test	0.571	0.571	0.426	0.426
Difference-Hansen	0.546	0.546	0.260	0.260
No. of instruments	30	30	54	54

With lag (2 2) STATA is instructed to use only the second lag of the endogenous variables as instruments and since this lag is correlated with the current error term, the other second lag is required as it is uncorrelated. Examining the one-step and two-step difference-GMM, the results reported in columns (1) and (2) reveal a satisfactory significant  $m_1$  (reject the null of no autocorrelation at 1 percent level) and  $m_2$  (fail to reject the null of no autocorrelation) tests values. Simply, it means there is a first-order autocorrelation but no evidence of second-order



autocorrelation in this estimation. A robust one-step difference-GMM test is performed producing the Hansen J-statistic for over-identification of which does not reject the null hypothesis that the error term is uncorrelated with the instruments. Even Difference-Hansen test fails to reject the null hypothesis of exogeneity of instrument subsets.

Both results of difference-GMM further imply previous years' carbon emissions do affect carbon emissions in the current year. Besides, it portrays the developing countries' dependency of their economy to the polluting carbon activities. Even though a few variables are insignificant in one-step difference-GMM, the two-step difference-GMM shows only three variables are not significant i.e. per capita GDP, urbanization and agriculture production. Interestingly, all the variables have the expected positive signs as explained theoretically except for urbanization and education having a negative sign nevertheless it is significant for education. It is somehow acceptable to argue that in the context of developing countries, a negative sign could mean an increase or improvement in the average level of total schooling may contribute to a reduction in carbon emissions since majority of these countries' population has a short time span of year in education. As for agricultural production, the negative value is only applicable for one-step GMM estimator besides it is insignificant.

As cautioned by Blundell and Bond relying on first-differenced GMM method to estimate autoregressive models for a series like per capita GDP may likely to perform poorly when dealing with series having close to random walk process causing the instruments to be rather weak. Taking this advice, it is acknowledged that this study utilizes per capita CO<sub>2</sub> emissions and lagged of per capita CO<sub>2</sub> emissions with eight time periods of five-year averages sample showing syndrome alike would foresee to have similar problems. Thus, using the system GMM estimates both one- and two-step as shown in Columns 3 and 4 of the table has five aspects to note. First, the lagged per capita CO<sub>2</sub> emissions rate has a positive and significant coefficient, whose size 0.65 and 0.64 each, disclosing this lagged dependent variable has a high degree of persistence. Second, the coefficient of energy usage in the one-step system GMM has shown an insignificant statistical value whilst the rest do not. In contrast the fossil fuels energy consumption coefficients reported a positive highly statistical significant for all GMM estimates. Third, coefficients of urbanization have turned from an insignificant (positive sign for one-step) value in differenced GMM to a significant negative value for both steps in system GMM. Fourth, industrial production has a positive coefficient yet highly significant only for two-step system GMM. Fifth, coefficients for education become a positive value in system GMM and statistically significant only for the two-step system GMM.

The two-step system GMM has preferably shown the coefficients of all estimators are significant at 1 percent significance level with only one exception that is energy usage at 5 percent significance level. More importantly, the Hansen J-statistic for over-identification does not reject the null, and the test for first-order serial correlation rejects the null of no first-order serial correlation, but it does not reject the null that there is no second-order serial correlation. Hence, these comply with the expected diagnostics. The results of the whole panel show evidence of the explanatory variables have a statistically significant positive effects on per capita CO<sub>2</sub> emissions except for urbanization having a significant negative effect on per capita CO<sub>2</sub> emissions. In the context of developing countries, the negative coefficient of urbanization could be due to the fact that for majority of the regions like Africa, South Asia and East Asia Pacific (covers 62 percent of the developing economies), their rate of urban population growth is still very low which may not have much impact on carbon emissions.

The results generally indicate the core variables that are per capita GDP, energy from fossil fuels, foreign direct investment, agriculture production and energy usage are crucial determinants of carbon emissions in these nations. It could be stated any increase (decrease) in GDP/cap, EFF, FDI, AGR and EUS would likely to increase (decrease) the amount of



carbon released in these developing nations. Developing nations are largely dependent on mainstream industrial activities to boost their economy and this is achieved through attracting FDI to cater to this type of sector thus a positive significant result implies an increase in industrial activities lead to increase in per capita emissions. Agriculture production is still a core activity to these nations given the reason mentioned earlier; a strong significant positive sign indicates raising farming production might lead to a higher per capita emission. As for education which has overturned to a positive significant sign, it could mean developing nations with higher income may be prone to overconsumption of material goods that they are unaware of and would be harmful to the environment. In developing countries, it is rather a norm to interpret a higher level of education appears to be a means of earning higher income that basically increases their ability to demand more for goods leading more natural resources being exploited ending with higher carbon emissions. Thus, educating them further is one way to increase their awareness about environmental protection.

## **5. Conclusions**

This study has attempted to examine the potential factors identified to be the key determinants of CO<sub>2</sub> emissions for selected 126 developing countries in four regions that are Africa, Latin America and the Caribbean, Middle East and North Africa, and Asia and the Pacific over the period of 1971–2009. Findings on these developing economies have indicated that the eight factors i.e. GDP per capita, energy consumption from fossil fuel (EFF), energy usage (EUS), inflows of foreign direct investment (FDI), urbanization (URB), industrial production (IND), agriculture production (AGR) and level of education (EDU) have portrayed a highly significant impact on the growth of carbon emissions. Martinez-Zarzoso and Maroutti (2011) have declared in their study that energy consumption is being singled out besides economic growth as having the most adverse impact on the environment globally. The conclusion is so long as output and population of developing nations grow in the name of prosperity to promote better standard of living and their welfare-being, carbon emissions will continue to rise persistently unless measures are taken by each country to control the emissions.

Although the policymaking to cut carbon emission has been centralized on energy conservation type of policies, a much broader scope that emphasizes on strict environmental and energy policies should be provided so as to ensure every aspect of method to cut carbon emissions must be addressed in these developing regions. It has to be noted that there is no single best solution for cutting CO<sub>2</sub> emissions, as Morancho, Tamarit and Zarzoso (2001) concluded that a uniform policy to control emissions is not suitable to reduce emissions problem. Thus, policymakers need to reinforce ways to achieve an ideal policy that able to balance their economic performance. A good reminder from Ahuja and Tatsutani (2009), to pursue a comprehensive set of policies all at once may not be possible unless the governments recognize an approach that is able to consider interactions of different policies and, leverages multiple opportunities at the same time responds to the specific needs and constraints of individual countries to attain maximum benefits.



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**Appendix 1:** List of developing countries representing the five regions

<b>Africa</b>	<b>Latin America &amp; the Caribbean</b>	<b>Middle East &amp; North Africa</b>	<b>South Asia</b>	<b>East Asia &amp; Pacific</b>
Angola	Antigua & Barbuda	Algeria	Afghanistan***	Brunei
Benin	Argentina	Bahrain	Bangladesh	Cambodia
Botswana	Belize	Djibouti	Bhutan	China
Burkina Faso	Bolivia	Egypt	India	Fiji
Burundi	Brazil	Iran	Maldives	Indonesia
Cameroon	Chile	Iraq	Nepal	Kiribati
Cape Verde	Colombia	Jordan	Pakistan	Republic of Korea
Central African Rep.	Costa Rica	Kuwait	Sri Lanka	Lao PDR
Chad	Cuba	Lebanon		Malaysia
Comoros	Dominica	Libya		Marshall Islands
Congo, DR	Dominican Rep.	Morocco		Micronesia, Fed.Sts.
Côte d'Ivoire	Ecuador	Oman		Mongolia
Equatorial Guinea	El Salvador	Qatar		Myanmar
Eritrea	Grenada	Saudi Arabia		Palau
Ethiopia	Guatemala	Syria		Papua New Guinea
Gabon	Guyana	Tunisia		Philippines
Gambia	Haiti	UAE		Samoa
Ghana	Honduras	Yemen		Solomon Islands
Guinea	Jamaica			Singapore
Guinea-Bissau	Mexico			Thailand
Kenya	Nicaragua			Timor-Leste
Lesotho**	Panama			Tonga
Liberia**	Paraguay			Vanuatu
Madagascar	Peru			Vietnam
Malawi	St. Kitts & Nevis			
Mali	St. Vincent & the Grenadines			
Mauritania	Suriname			
Mauritius	Trinidad & Tobago			
Mozambique	Uruguay			
Namibia	Venezuela, RB			
Niger				
Nigeria				
Rwanda				
Sao Tome & Principe				
Senegal				
Seychelles				
Sierra Leone				
Somalia***				
South Africa				
Sudan				
Swaziland				
Tanzania				
Togo				
Uganda				
Zambia				
Zimbabwe				



## Factors Affecting Customers' Online Purchasing Behaviour: The Mediating Role of Purchase Intention

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### Abstract

Online purchasing is a global phenomenon that is growing rapidly. The purpose of this study is to investigate how internet is used as a strategic tool that affects customer online purchasing behaviour among online purchasers in Malaysia. This study used correlational design as it describes the significant variables that relate to customer online purchasing behavior. The method used in this study is a quantitative approach using a questionnaire as a data collection tool. The data were collected using online means and analysed using correlation and regression analyses. The findings of the data revealed that all the independent variables are significant to influence the dependent variable (customer online purchasing behaviour). Purchase intention mediates the relationship between website quality and online purchase behaviour and the relationship between security and online purchase behaviour. This study provides implications to sellers to improvise their methods when selling their products online.

**Keywords:** customer online purchasing behaviour, purchase intention, security, website quality, usefulness, return policy, trust

### 1. Introduction

The use of the internet is growing quickly since the last two decades to contribute to advanced economy that is driven by data innovation that has been the main agenda around the globe. According to Kumar (2012), after a long-haul advancement of the web, which has quickly expanded web users and high-speed internet connection, and some new innovation likewise has been created and utilised for web developing, those prompt firms can enhance and upgrade images of products and services online. In this manner, detailed product data and



enhanced services attract an ever-increasing number of individuals to change their buying behaviour from the traditional mode to relying more on the online shopping. Purchasing a product in the online environment is an increasingly common practice for consumers worldwide, especially in those countries with well-developed marketing infrastructure (Kau, Tang & Ghose, 2003). Customers in all age groups use the Internet as a substituting channel for acquiring goods and services. The consistent development of online marketing has created extraordinary enthusiasm to contemplate on online consumer behaviour. Given the noteworthy development in internet shopping, a better comprehension of buyers enables better marketing strategies to be structured. Despite the growing shopping culture, more internet savvy users are currently moving towards online shopping. Then again, the exponential increment in internet shopping and the quick rate of development in the number of retailers moving on the web have created a great degree of extremely competitive marketplace (Vaghela, 2017).

In the business-to-consumer (B2C) web-based business cycle activity, customers utilise the internet for some reasons and purposes. For example, looking for product features, prices or reviews, choosing products and services online, submitting orders, making payments, or other means which are then trailed by the business of the required items through the web, or other different means (Sinha, 2010). E-commerce has become an important marketing site in business transactions. Online shops and services are important sales channels in B2C transactions. During the past decade, studying online shopping behaviour of consumers has been one of the most popular research agendas in e-commerce (Chen, 2009). Online consumer behaviour research has been conducted in multiple disciplines including social science, marketing, information systems, psychology and social psychology (Zhou et al., 2007).

Internet usage has been the fast growing phenomenon globally. An enhanced ICT infrastructure, high penetration rate, faster speed along with affordable prices for internet service have increased the volume of internet users. This also affects the online business community as the online shoppers have increased rapidly over the years. However, there are still some people who are reluctant to shop online. This study is ought to investigate the factors that affect consumer buying behaviour and their intention to shop online. A lot of effort given to grasp online consumers has induced the online sellers to go further in order to understand consumer behaviour. Ramayah and Ignatius (2005) stated that although both government and private sectors have put a lot of effort to prosper the online shopping platform, physical store remains as the main choice for majority of consumers. Previous study by IPSOS Open Thinking Exchange (2012) found that 56 percent of the respondents from 24 countries prefer to shop in a physical store rather than an online store (Marketing Charts, 2012). Even in developed countries such as United States, 63 percent of the consumers would make an online survey before proceeding to purchase the traditional consumer electronics products online, but only half of the consumers will truly purchase online (NPD Group, 2011).

Online shopping is a way where consumers can purchase good or service directly from home without the need to go physically to the store to make a transaction. It has been more than a decade since the e-commerce first evolved and it has been the most useful marketing tool to serve whether for domestic or international transactions. According to Joines, Scherer and Scheufele (2003), the number of internet users is constantly increasing, that explains why online purchasing is increasing rapidly. Nevertheless, Kearney (2013) stated that Malaysia dropped out from the 30th position in top 30th global retail e-commerce ranking in 2015 because of the reluctance of Malaysians to change their behaviour and culture that prevent them from embracing online shopping (Harn, Khatibi & Ismail, 2006). Critical understanding



of consumer behaviour in the e-commerce can be achieved if the factors that affect the purchase decision are clearly identified.

According to Lim and Abdullah (2015), consumers tend to listen to verbal recommendation from close families and friends or even media before making a shopping decision. Therefore, online stores need to maximise their effort in delivering and performing good customer service in order to change their perceptions which results in increasing Malaysians' interest and changing their thinking over e-commerce. The objective of this paper is to investigate factors that influence consumer behaviour to shop online by looking at purchase intention as the mediator.

## **2. Literature Review**

### **2.1 Customer Online Purchasing Behaviour**

Online shopping behaviour refers to the process of purchasing products or services via the Internet. Online shopping became popular in 1990s with the popularisation of the World Wide Web (WWW). Mohd Daud, Nor Mohd, Shamsudin, Zaidan and Mohamed (2016) defined online shopping behaviour as the activity on shopping that is normally performed by a consumer through the computer-based interface, which the computer is connected to, and can interact with the retailer's digital storefront. Adnan and Hooria (2014) stated that online shopping behaviour refers to the activity that involves the purchasing of goods or services over the internet.

According to Singh and Sailo (2013), customer online purchasing behaviour always focuses on individuals or groups or organisations. They used to choose, assure and organise results, services or concepts to fulfil the consumers' needs and also those of groups of society (Kuester & Sabine, 2012). Consumer's behaviour has been measured through variety of dimensions. According to Shahzad (2015), the first dimension begins with purchaser's behaviour that is related to utilitarian motivation (time usefulness, advantages, quality of the goods, assortment of searching and satisfaction) (Gozukara, Ozyer, & Kocoglu, 2014). The second dimension is about hedonic motivation, for instance individuals may be influenced to initiate behaviours which lead to rewards or away from un-benefitted behaviours (pleasure, imagination, escapism, suddenly aware, passion & entertainment), and Baber (2014) mentioned that the third dimension includes perceived ease of use, and functionality. Another dimension is discerning risk which affects purchaser's behaviour towards online shopping.

According to Davis (1989), attitude and behavioural intention towards the online environment have been included in Technology Acceptance Model (TAM). It refers to the user's intention to establish an online information exchange relationship and involves online transaction with a web retailer (Zwass, 1988). Besides, the extent to which using a website can provide a good source of information helps a user to get updated, accurate, and detailed information (Wen, 2012). Today, the modern market encompasses greater range of businesses and services. Most of them are closely related to the electronic commerce (e-commerce) where it is the process of purchases and sales of goods or services that are being conducted over the Internet. Therefore, as people nowadays are closer to the technology, they will prefer to use the online methods to purchase goods or services. Customer online purchasing behaviour can be influenced by certain factors. Then, next following literature review section will discuss one of the factors which is security.



## 2.2 Security

When purchasing online, the important element that needs to be highlighted is the security of website operations. In online websites, the function of salesperson is substituted with the help of buttons and other features that remove the base of purchasers' trust experience (Lohse, 1998). Purchasers cannot tangibly check the quality of the outcome or check out whether it is safe and secure when sharing financial and personal information while shopping online (Lee & Turban, 2001). The website needs to stress the use of security to secure transactions and it is necessary to execute security procedure (Kriemadis, Kotsovos, & Kartakoullis, 2003). In addition to maximis customers' confidence, an optional link to a security practice page and legal notices for visitors should be provided by the website. However, the relationship between security and customer online purchasing behaviour is consistently low. This is supported by Kriemadis, Kotsovos and Kartakoullis (2009) by saying that security does not really affect customer online purchasing behaviour and that is the reason why they choose to shop online. This why a mediator is needed in this study, which is purchase intention in order to explain the role of security in influencing online purchase behaviour.

## 2.3 Website Quality

Website quality is the users' evaluation of a website's features in meeting their needs and reflecting overall superiority of the website (Aladwani & Palvia, 2002). As cited by Frederick, Tiangshu, Eric and Young (2017), website quality refers to the most important determinant of an online operation. Besides, it also refers to the extent of which a website's features meet customers' needs hence they all reflect overall superiority of the website. Besides, Parasuraman, Zeithaml and Malhotra (2004) have demonstrated in their study which revealed that the tendency to attract more customers with the use of high quality websites is higher compared to the ones with low quality. After all, website quality plays a very important role in order to give the best interactions and interfaces to the users or customers. This strategy can create competitive edge as technology has become a massive thing in many industries. However, the relationship between website quality and online purchase behaviour is consistently weak, that is why purchase intention is included in the equation.

## 2.4 Usefulness

Perceived usefulness is characterised as the individual's recognition in which using the new technology will upgrade or improve their performance (Davis, 1989; Davis, Bagozzi, & Warshaw, 1989). This study accepts the idea that the power to draw in online customers lies within the technology's ease of use and usefulness. As mentioned by Davis (1989) cited in Ramayah and Ignatius (2005) who characterizes the latter as perceived usefulness (PU), the belief that utilising the application would increase one's performance. In this setting, the performance would be centred on the benefits of obtaining an item through Web retailing minus the trade-off of a physical retailing. Furthermore, the Web retailing ought to be "free from effort", which reflects the previous as the perceived ease of use built within the Technology Acceptance Model (TAM) of Davis (1989). In the past, researchers (e.g. Koufaris, 2002) have approved the role of PU and it was found to affect potential Web customers. Horton et al. (2002) declared the presence of a positive impact of PU in the use of Intranet media. Also, Chau and Hu (2002), Mathieson et al. (2001), Moon and Kim (2001), Ramayah et al. (2002), Venkatesh and Davis (2000) also claimed that PU is critical to emphatically affect the behavioural intent. Applying this definition to the setting of online shopping, usefulness convinces customers to accept using the Web as a medium that will improve their performance or productivity, hence upgrading the result of their shopping experience (Monsuwe, Dellaert,



& Ruyter, 2004). Perceived usefulness is related to the result of the shopping experience (Monsuwe et al., 2004). Detailed data, availability, and speed, as well as accessibility of cheap and convenient purchases, have often been said as the main benefits of online shopping (Khalifa & Limayem, 2003; Shim, Shin, & Nottingham, 2002). For experienced web users who are active in the middle of typical shopping hours, the accessibility and speed of shopping may really be valuable features.

## **2.5 Trust**

Online trust is the basic and essential element for building the relationship with customers. Most people purchase products or services based on their level of trust with the sellers either in the physical stores or online shops. Based on the research from Cassell and Bickmore (2000), the level of online trust is lower than face-to-face interactions in the physical store. The trustworthiness of e-commerce web site depends on how much privacy and security can be provided. For example, a highly technical competence can be a factor to influence the trustworthiness (Singh & Sirdeshmukh, 2000). A study by Ray, Ow and Kim (2011) shows that more than 87% of users were concerned about security and privacy protection in online shopping. Therefore, trust plays a vital role in e-commerce because a lack of privacy and security protection becomes the main reason people refuse to purchase products or services online.

## **2.6 Return Policy**

One of the toughest advantages of ordering online is the Return Back Policy. According to Hoffman and Bateson (1997), customers will think that an organisation is committed to deliver high quality products and service when they offer guarantees to their customers. For example, using money back guarantee for customers will reinforce customer loyalty to an organization that results in forming regular customers in an organization. Thanos, Adreas and Nikos (2009) stated that customers are more likely to purchase product when they know that returning the product will be a minimal difficulty and at no cost. They also added that using convenient returning information to the customer will provide a fair return system which involves low perceived risk in the process between the consumer and the organisation.

Based on the previously mentioned studies by Nguyen, Leeuw and Dullaert (2016), return procedures, return preparation, return options, refunds and return handling are related to return management. Return management refers to the process where damaged, unwanted or faulty products are returned from consumers to retailers. Normally, this process is described as a return policy. The return procedure consists of several steps that need to be followed which an online must go to the retailer to return the product. Return options are also available depending on the channels or retailers whether they can send someone to pick up returned product at home or sending back the returned product through post. The relationship between return policy and customer online purchasing behavior is expected to be consistently weak. That is why a mediator is needed in this study which is purchase intention.

## **2.7 Purchase Intention**

Purchase intention refers to the willingness of customer/consumer/people to buy products or services. According to Mathieson (1991), there are two core theories to test and predict an individual's intention to utilise information systems which are technology acceptance model (TAM) and theory of planned behaviour (TPB). Technology acceptance model (TAM) measures perceived ease of use and perceived usefulness of the customers whereas the theory of planned behaviour (TPB) measures the perceived behavioural control and the sum



of the attitudes from the people surrounding them. He et al. (2008) stated that lack of intention to purchase online is the main obstacle in the development of e-commerce. It is assumed that intentions capture the motivational factors that influence behaviour and when the intention to engage in behaviour is stronger, the more likely should be its performance (Ajzen, 1991).

### 3. Methodology

The data in this study were collected by using online method. This was due to the target respondents of the study which are online purchasers. The method used in this study was quantitative method by using a multiple choice questions through a questionnaire. The questionnaires were distributed to 190 respondents. Only 131 questionnaires were collected during the study. Convenience sampling was used in this study to select the samples. The data analysis used was a multiple linear regression analysis.

## 4. Findings

### 4.1 Demographic Background

In the questionnaires distributed, the respondents' demographic information was gauged through items in section A. The demographic background information of the respondents includes gender, marital status, age, and also educational level. Table 1 shows the frequencies and the percentages of respondent's demographic background information.

**Table 1: Demographic Profile of Respondents**

Item	Frequency	Percentage (%)
<b>Gender</b>		
Males	30	22.9
Females	101	77.1
<b>Marital Status</b>		
Single	76	58.0
Married	55	42.0
<b>Age</b>		
Less than 20	6	4.6
21-30	70	53.4
31-40	27	20.6
41-50	24	18.3
51 and above	4	3.1
<b>Educational Level</b>		
Certificate	2	1.5
SPM	13	9.9
Diploma	17	13.0
Degree	71	54.2
Master	27	20.6
PhD	1	1.0

In terms of gender, there were a total of 30 (22.9%) male respondents while the other, the female respondents were 101 (77.1%) of the total response. In terms of marital status, the average number of single respondents were 76 (58.0%) against the other 55 (42.0%) respondents who were already married. A total of six respondents (4.6%) were less than 20 years old, 70 respondents (53.4%) were aged 21 to 30 years old, and 27 respondents (20.6%) were 31 to 40 years old. Meanwhile, 24 respondents (18.3%) were 41 to 50 years old, and



four respondents (3.1%) were 51 years old and above. In terms of educational level, based on table 4.1, the highest number of respondents was 71 respondents (54.2%) who have Degree, qualification meanwhile the second highest level were respondents who have Master qualification which was 27 (20,6%) respondents. Other than that, 17 respondents (13.0%) had Diploma qualification, 13 respondents (9.9%) had SPM qualification and two respondents (1.5%) had Certificate qualification. Lastly, the rest of one respondent (1.0%) had PhD.

## 4.2 Factor Analysis

**Table 2: Result of Factor Analysis for Independent Variables (Security, Website Quality, Trust, and Usefulness)**

Items	Components			
	1	2	3	4
I buy from online store only if the site content is easy for me to understand.	.867			
I buy from online store only if the information provided is relevant.	.867			
I buy from online stores only if their website is visually appealing and have a well-organised appearance.	.802			
Website quality helps me in searching the products easily.	.779			
I feel that my credit card detail may be compromised and misused if I shop online.		.823		
It is hard to judge the quality of merchandise over the internet.		.754		
I might get overcharged if I shop online as the retailer has my credit card information.		.751		
I might not receive the product ordered online.		.702		
I will have problem in returning product bought online.			.900	
I feel that there will be difficulty in settling disputes when I shop online (e.g. while exchanging products).			.869	
I hesitate to shop online as there is a high risk of receiving malfunctioning merchandise.			.737	
I feel safe and secure while shopping online.				.893
Online shopping protects my security.				.879
% of variance explained	22.358	19.811	18.522	12.963
KMO				.799
Approx. Chi Square				852.282
Df				78
Sig				.000
MSA				.593-.884

Table 2 displays the result of factor analysis of independent variables in this study. A principal component factor analysis with varimax rotation was performed to examine the factor structure of the 18 items related to customer trust, return policy, security, usefulness, and website quality. According to the result, one of the attributes which is usefulness was dropped as it was a complex variable that has high loadings on more than one factor, and this makes interpretation of the output difficult. The result indicates the existence of four distinct structures which explain 73.654% of the variance with each factor explains 22.358, 19.811, 18.522 and 12.963, respectively. The KMO value of .799 indicates that the correlation matrix among the items is sufficient for factor analysis to be conducted. The MSA values range from .593 - .884. The first factor contains four items related to website quality; thus, the name was retained.



The second factor includes four items concerning the factor of trust; therefore, the name was also retained. The third factor holds the three items related to return policy; therefore, the name was also maintained. The fourth factor holds two items concerning on security; hence, the name was kept.

**Table 3: Result of Factor Analysis for Dependent Variables (Customer Online Purchasing Behaviour)**

Items	Component
	1
I buy goods and services from many online market platforms.	.898
I buy a wide variety of products and services online.	.897
I often buy goods and services online.	.885
I spend a lot of money when shopping online.	.821
% of variance explained	76.720
KMO	.816
Approx. Chi Square	325.428
Df	6
Sig	.000
MSA	.778-.868

Table 3 displays the result of factor analysis of dependent variable in this study. A principal component factor analysis with varimax rotation was performed to examine the factor structure of the four items related to online purchaser behaviour. According to the result, with cut-off loading of 0.5 and eigenvalues greater than 1.0, none of the items was dropped. The result indicates the existence of one distinct structure, which explains 76.720% of the variance. The KMO value of .816 indicates that the correlation matrix among the items is sufficient for factor analysis to be conducted. The MSA values range from .778 - .868. The factor contains four items related to consumer online buying behaviour; thus, the name was retained.

**Table 4: Result of Factor Analysis for the Mediator (Purchase Intention)**

Items	Component
	1
I shop online because I get detailed product information online.	.852
I shop online because I get better deals than in traditional retailing stores.	.799
I shop online as I can avoid market crowd.	.779
I shop online because I can avoid embarrassment if I change my mind.	.685
% of variance explained	61.018
KMO	.747
Approx. Chi Square	151.817
Df	6
Sig	.000
MSA	.708-.810

Table 4 displays the result of factor analysis of mediator in this study. A principal component factor analysis with varimax rotation was performed to examine the factor structure of the four items related to purchase intention. According to the result, with cut-off loading of 0.5 and eigenvalues greater than 1.0, none of the items was dropped. The result indicates the existence of one distinct structure which explains 61.018% of the variance. The KMO value of .747 indicates that the correlation matrix among the items is sufficient for factor analysis to be conducted. The MSA values range from .708 - .810. The factor contains four items related to purchase intention; thus, the name was retained.



### 4.3 Reliability Analysis

According to Salkind (2017), reliability occurs when the same thing is measured repeatedly during a test and the results appear to be similar with the outcomes. Reliability can be achieved if the Cronbach's Alpha coefficient of scale is above 0.7 (Pallant, 2005). If the Cronbach's Alpha is less than 0.6 it is considered poor, if the score is 0.7 it is considered acceptable, while if the Cronbach's Alpha is over 0.8 it is considered good (Sekaran & Bougie, 2013). According to Table 4.5, the highest Cronbach's alpha value is .896 that belongs to consumer online buying behavior and the lowest Cronbach's alpha value is .791 which refers to security. All variables are considered reliable because their Cronbach's Alpha values are above 0.7 (Palant, 2005).

### 4.4 Correlation Analysis

According to Salkind (2012), correlation refers to a technique used to measure the relationship between two variables by using Pearson Product Moment Coefficient. The relationships of the independent variables (trust, return policy, and security), the mediator (purchase intention), and the dependent variable (consumer online buying behavior) were examined. Purchase intention has high, positive and strong significance correlation value towards consumer online buying behavior ( $r = .618, p < 0.01$ ). Other than that, website quality has moderate, positive and strong significance correlation value towards consumer online buying behavior ( $r = .439, p < 0.01$ ). Next, security has moderate, positive and strong significance correlation value towards consumer online buying behavior ( $r = .482, p < 0.01$ ). Besides, trust has low, positive and the correlation value and is not significant towards consumer online buying behavior and is ( $r = .054, p > 0.5$ ). Furthermore, return policy has low, negative and the correlation value is not significant towards customer online purchasing behavior ( $r = -.022, p > 0.5$ ).

**Table 5: Result of Correlation Analysis**

No.	Variables	Mean	SD	1	2	3	4	5	6
1.	Website Quality	4.14	.73	(.791)					
2.	Trust	3.73	.87	.158*	(.808)				
3.	Return Policy	3.86	.93	.169*	.588**	(.808)			
4.	Security	3.13	.77	.319**	-.023	-.089	(.867)		
5.	Purchase intention	3.74	.84	.566**	.138	.148*	.358**	(.896)	
6.	Customer Online Purchasing Behavior	3.45	1.01	.439**	.054	-.022	.482**	.618**	(.772)

\* Correlation is significant at the level 0.05 (1-tailed)

\*\* Correlation is significant at the 0.01 level (1-tailed)



#### 4.5 Regression Analysis

**Table 6: Result of Regression Analysis: Purchase Intention as the Dependent Variable**

Variables	Standardized Beta Coefficients
Website Design	.483**
Trust	.025
Return Policy	.070
Security	.210**
R	.602
R <sup>2</sup>	.362
Adjusted R <sup>2</sup>	.342
F value	17.902
Significant F Value	.000
Durbin-Watson	1.846

**Table 7: Result of Regression Analysis: Testing of Mediating Effect**

Independent Variables	Without Mediator	With Mediator	Remarks
Website Quality	.323**	.093	PI is the complete mediator for WD and COBB
Trust	.056	.044	PI is not a mediator
Return Policy	-.076	-.110	PI is not a mediator
Security	.373**	.272**	PI is the quasi mediator for Security and COBB
Mediator		.478**	PI is significant at .000
R	.571	.687	
R <sup>2</sup>	.326	.472	
Adjusted R <sup>2</sup>	.305	.451	
F value	15.520	22.345	
Significant F Value	.000	.000	
Durbin-Watson	-	2.074	

From the results above, it can be said that purchase intention is the mediator for both the relationship between website quality and customer online purchase behaviour and the relationship between security and customer online purchasing behaviour. However, purchase intention is the complete mediator for the link between website quality and customer online purchasing behaviour meanwhile, purchase intention is the quasi mediator for the link between security and customer online purchasing behaviour. Website quality affects purchase intention; hence, it will affect customer online purchasing behaviour but for security, it can directly affect customer online purchasing behaviour either with or without purchase intention as the mediator. The retailer should focus on website quality and security to enhance purchase intention and purchase behaviour.

Trust does not influence purchase intention on customer online purchasing behaviour because the online customers have already trusted the website. This is because an authorised online business should comply with government regulations first upon creating the business. The same reason also goes to return policy. Return policy does not affect purchase intention hence; it would not affect customer online purchasing behaviour as the return policy of online business should be aligned with government regulations. Therefore, the online customers would not feel insecure for both factors as they would have trust when using the website.



## 5. Recommendations

Online shopping is increasingly gaining reputation among people especially the younger generation but in this new era, it becomes more popular among all age groups of online shoppers similarly all around the world. This research has been conducted to know which factors (security, website quality, trust and return policy) affect customer online purchase behaviour. So, this study has shown that only two factors which are website quality and security significantly affect customer online purchase behaviour. However, there is another factor that mediates the effect of these two factors on customer online buying behaviour which is purchase intention. In this study, we acknowledge that purchase intention mediates the relationship between website quality and customer online buying behaviour. Besides, purchase intention also mediates the relationship between security and customer online buying behaviour.

Therefore, the researcher of this study would like to recommend that all online business retailers or sellers focus more on website quality and security. For website quality, it is good if the online retailers could maintain the functionality of user interface that would give clear guidance to the customers hence, it would also give convenience to them when browsing their website. Besides, they should also improve their website quality in terms of interactions with the website. For example, they could create a website with more attractive and creative ways to promote and to sell their goods or services. This kind of strategy could arouse the attention and interest of the customers to frequently visit and shop through their website. So, it could be said that all online retailers should improve and enhance the effectiveness and efficiency of their website so that customers would love to shop or visit their website and stay loyal.

Besides, the online retailers should also focus on the security. Security is one of the vital aspects that consumers will see before making an online purchase. Having their personal information such as full name, delivery address and date of birth being shared, a consumer would always easily feel anxious that his or her details may get disclosed when they shop online. Therefore, all online retailers should improve their security settings by enabling two-step authentication which can develop consumer trust or assurance that they could safely shop through online shopping websites as they feel their information is secured. After all, the assurance on the security of the website is the major influence for online shoppers to shop online and so, this factor does affect their decision making processes.

Overall, all online retailers should focus more on improving their website quality and security in order to make sure that the online customers would stay loyal to their business. Besides, it can be said that loyal customers are the agents of word-of-mouth to other possible online customers. Therefore, it is a way that online retailers could gain more possible customers. After all, the online customers are the assets to the online business. Thus, in order for the business to stay relevant in the future, they should maintain their customers as they are the reasons for the business profit growth and increase of return on investment of the business.

## 6. Conclusion

Therefore, it can be said that website quality, and security have relationship with online consumer buying behaviour. The retailers should focus on these factors in order to maintain or improve their online business. The study indicates that out of five variables which are trust, website quality, return policy, security and purchase intention, only purchase intention has high, positive and strong significant correlation with online consumer buying behaviour. After all, many other aspects should be considered in this study. Hence, there are some



recommendations to be proposed. Online shopping sellers should improve their security settings by enabling two-step authentications which can develop consumer trust because they feel their information is secured. Furthermore, the number of studies focusing on product return as an element of consumer behaviour in online retailing is limited. This suggests the potential for developing researches focusing on order-fulfilment elements on product return for future studies.

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## **A Study on Precautionary Steps in Purchasing Goods Online**

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### **Abstract**

Despite significant development on online transactions in Malaysia, there are also risks and challenges in their applications. Previous researchers contended that, the Malaysian statutes do not sufficiently protect the online shoppers. Although the law requires that the goods purchased must correspond with the descriptions, the online shoppers still need to take certain precautionary steps to avoid from being cheated. The objectives of this research are to explore the precautionary steps taken by online shoppers before they purchased goods online and to analyze their experiences that may influence purchasing decision. This doctrinal research adopted a qualitative method where 30 respondents were interviewed. The result shows various actions taken by them before purchasing online and most of them rely on their experience before they proceed with second purchases. Thus, this research will enlighten and suggest the precautionary steps for online consumers to adhere to in order to avoid unnecessary risks in purchasing online.

**Keywords:** Precautionary step, Online shopping, Purchase goods online.

### **1. Introduction**

Online shopping is preferred from year to year. Various factors leading to its emergence such as time saving, variety in product choices and lower prices contribute to the increase on online consumers. According to the 11 street's survey which was conducted from November 15th to 21st in 2016 with 3,507 respondents, over 80 percent of the respondents preferred online shopping rather than face to face shopping. The survey also reported that those who were yet



to do their shopping online conveyed their interest to purchase goods online within the following year. An online transaction does not only benefit the buyer but also the seller that leads to mitigation of the cost of storage and employment of staff (Grandon and Paerson, 2004). The sellers could enlarge their marketing targets and simultaneously could increase the number of their customers (Gupta & Bansal, 2013).

Notwithstanding the various advantages in online purchasing, there are also challenges and problems faced by consumers. Due to the inability to physically check the product prior to purchase, online consumers could be cheated by unscrupulous sellers such as in cases of defective products (Varma & Agarwal, 2014) goods that are not fit for their purposes, goods not corresponding with the description, delay in delivering goods and ultimately, undelivered goods. Moreover, the online consumer might receive goods which are not in good condition. This would lead to having bad experiences in purchasing online and at the same time, causing monetary losses to the seller (Noorshella, Abdullah, Nurul Haslana & Mohd Nazri, 2019).

In Malaysia, various legislations have been enacted by the legislature such as the Direct Sales Act 1993, the Digital Signature Act 1997, the Electronic Commerce Act 2006 and in 2007, the Parliament amended the Consumer Protection Act 1999 to extend its application to online consumers. Previous researchers believed the existing statutes are still insufficient to protect the consumers who purchase online. Kamal (2012) contended that there is no single government Act which protects the online consumers particularly in the case of proving false advertisement and descriptions of goods. Although there have been legislative reforms to the existing law, there are areas that need to be improved to protect consumers in cases of cross-border online transactions (Naemah, 2013). Due to this, it is suggested that online consumers cannot rely totally on existing laws to protect their rights. They must take precautionary steps before purchasing goods online to avoid from being cheated by devious sellers. The online consumers should not just accept their fate and abandon their rights if the goods they have bought online are not the same as they expected. This research paper aims to discover the steps taken by online consumers before and after they purchased goods through online. The consumer's experiences in purchasing online were also explored to identify the steps taken by them in case goods ordered do not correspond with the description. As an alternative to mitigate risks, this current research will suggest several steps to facilitate online consumers and will subsequently become one of the ways to close the gap in the existing law.

## 2. Methodology

This is a qualitative research that aims to explore the precautionary steps taken by online buyers before purchasing online products. The data collection was conducted through face to face interview. The questions were structured, and the same questions were posed to all respondents. This study used non-probability sampling through convenience sampling where the respondents were selected based on their experience in purchasing online products. The question on whether the respondent has purchased products through online or face to face purchased was an initial question before selecting the respondents. The interview only focused on the respondents that lived in the Central Melaka District. Table 1 shows the demographic profile of the respondents.



**Table 1: Demographic Profile**

<b>Demographic Variables</b>	<b>Items</b>	<b>Frequency of Respondents</b>
<b>Gender</b>	Male	8
	Female	22
<b>Age</b>	Below 25 Years Old	21
	25 – 35 Years Old	6
	36 – 45 Years Old	1
	46 – 55 Years Old	2
<b>Marital Status</b>	Single	23
	Married	7
<b>Educational Level</b>	STPM / Certificate / Diploma / Matriculation	9
	Degree	17
	Master	4
	PhD	0
<b>Occupation</b>	Government	10
	Private	7
	Self-employed	3
	Student	10

Four questions were asked to the respondents. The first question is regarding their awareness on a duty to avoid being cheated by unscrupulous seller. The second question is on the precautionary steps taken by online buyers before purchasing online products. The third question is on their experience in purchasing online products and the fourth one is on steps taken by them if the purchased product does not correspond with the description attached to the product. The interview sessions were audio-recorded with the permission of respondents and transcribed in full.

The structured interviews were analyzed and coded as H1 to H30. The responses were organized according to the coding of open-ended questions where it does not limit answers given by respondents but permits the respondents to provide any answer which may seem necessary and relevant for them to give. Most of the respondents gave similar answers but stating them in different words. Nonetheless, there were also different answers given. Thirty answers from thirty respondents were compiled based on each of the questions and they were adequately analyzed to find similarities and discrepancies.

### **3. Findings**

#### **3.1 Duty to avoid being cheated**

According to the interviews conducted, although most of the respondents believed that they had a duty as the consumer to avoid being cheated, there were also respondents who were not aware of their own responsibility particularly R8, R9, R14, R21, R22, R23, R24 and R28. Those who were aware of their duty to avoid being cheated believed that they had to have some kind of self-measure / awareness such as to be careful before purchasing and one of them even said that he needed to be knowledgeable before deciding to purchase online products.



### **3.2 Precautionary steps taken by online buyers before purchasing online.**

This study explored the steps taken by online shoppers before they ordered goods online. From the interviews taken, the most popular precautionary steps taken by them were reading online reviews related to the goods they intended to purchase. Out of thirty (30) respondents, seventeen (17) respondents preferred to read the reviews from the seller's previous customers before they purchased online. A few respondents (R1, R2, R3) admitted that they actually contacted the seller or the drop shipper about the product before deciding to purchase goods online; one respondent (R10) even checked the seller's details and others (R5, R6, R11, R14, R15, R16, R23, R24) went further to check other details such as the seller's registration number at the Registrar of Company. Other precautionary steps taken were comparing the products and price; there were four (4) respondents who did a few research on the seller's product and website.

### **3.3 Experiences in purchasing online products**

The respondents were also asked as to whether they had any experience in purchasing goods online or offline but the goods purchased or received by them did not comply with the description stated in the advertisement. There were seventeen (17) respondents had an experience of goods purchased but not complying with the stated descriptions. Amongst the experiences faced by them were receiving different sizes, difference in materials and colour and was given a plastic ring instead of the ordered metal ring.

### **3.4 Steps taken if the purchased product did not correspond with the description attached**

The last question focused on the steps taken after the goods purchased were delivered to the respondents. Most of respondents would try to get refunded by the seller if they received products which did not comply with descriptions. Other steps taken were lodging complaints to the Companies Commission of Malaysia, requesting for product replacement and making a police report. However, there are still respondents who were just being plain ignorant and did nothing even they had received products that were not the same as described.

## **4. Discussions**

Online shopping refers to the process in which consumers directly purchase goods from a seller over the internet (Laxmi & Kumar, 2016). It also refers to the process of doing research on interested products and services over the internet (Varma & Agarwal, 2014). In addition, it is the process of searching, browsing and purchasing goods through online directly from e-sellers (Vos, Marinagi, Trivellas, Eberhagen, Skaourlas & Giannakopolous, 2014). There are two stages involved in the online shopping; the first stage involves finding, comparing, choosing and ordering of goods. The second stage is for tracking of order and keeping or returning of goods, termed as the order fulfilment stage (Liao, Palvin and Lin, 2010). The term "consumer" refers to a person who purchases goods not for commercial purposes as mentioned in section 3 of the Consumer Protection Act 1999 (CPA 1999). According to that section:

"goods means goods...which are primarily purchased, used or consumed for personal, domestic or household purposes which includes goods attached to, or incorporated in, any real or personal property; animals, including fish; vessels and vehicles; utilities; and trees, plants and crops whether



on, under or attached to land or not but does not include choses in action including negotiable instruments, shares, debentures and money...”.

Hence, any online purchases of consumer goods are subject to the protection under the CPA 1999. Consumers tend to buy anything under the sun online and it is probably critical for the law to include precautionary steps to caution consumers of anything that could cause unnecessary loss to them.

Despite the rapid development in online shopping which conveniently facilitates shopping activities for consumers, there are risks that promote frustrating, confusing and overwhelming processes (Dai, Forsythe & Kwon, 2014). There is a likelihood that consumers might be deceived in such a transaction for undelivered goods, goods not corresponding with the descriptions or unmerchantable goods. The Consumer Protection Act 1999 does not exclusively protect the online buyers especially in a case of unscrupulous or dummy seller. According to Roshazlizawati and Naemah (2015), the Consumer Protection Act 1999 does not generate a means to solve problems suffered by online consumers particularly in cases of them receiving low quality goods. Moreover, the Tribunal for Consumer Claim that was introduced within the ambit of the Consumer Protection Act 1999 only attends to the claim if the online consumer can identify the address of the seller (Yuhanza, Mimi Sofiah, Ekmil Krisnawati, Nur Idayu, Zuhairah & Siti Nurul Akma, 2017). In 2012, the Parliament introduced the Consumer Protection (Electronic Trade Transactions) Regulations 2012 which came into operation in 1 July 2013 to include online transactions. These regulations focus on the responsibilities of online market operators to disclose information such as the name of a person who operates the online business, the registration number of the business, the description of goods, the full price of goods, the mode of payment, terms and estimated time of delivery. Although these regulations indirectly protect the consumers in cases of fraud, further improvement to the existing statutes is crucial to strengthen and ensure adequate protection for online consumers (Naemah, 2013).

Online transactions will depend much on the advertisement of the goods. The goods will usually be offered by way of description through the internet and the customers only rely on the description displayed without having the opportunity to physically examine whether there are any defects in the goods. In Malaysia, sales by description are governed by section 15 of the Sale of Goods Act 1957 which stipulates that the seller should deliver goods that correspond with their descriptions. The Act also states clearly on the sale by sample as according to section 17 that the seller should deliver the goods as sample. Besides the Sale of Goods Act 1957, the Consumer Protection Act 1999 also provides the same obligation to the seller. All the respondents agreed that they need to be aware that the goods they purchased through online must comply with the description stated by the seller and both Acts allow online consumers to bring an action against the seller if the goods supplied do not conform to the description. However, according to Kamal (2012), there will be problems in proving such a case because the description on the internet can be easily tampered, changed or erased by anyone who has access to it. The seller can simply abscond and sometimes it is difficult for customers to get refunds (Abdul Halim, 2018).

Thus, due to the insufficient protection and ambiguous provisions in existing laws, the online consumers must take their own precautions to avoid risks. According to Mohammad Fazli (2014), the aim of having “smart consumers” should be continuous so that consumers could protect themselves. Indeed, continuous efforts from the government are important to safeguard the rights and interest of consumers. Due to limited physical access to goods and products (Forsythe, Liu, Shannon & Gardner, 2003), the risk to get cheated in online shopping is higher than that of offline shopping. The online consumers cannot examine the defect of the



goods and has no opportunity to physically compare the goods. Therefore, to reduce risks, the consumers should be aware of their own rights.

According to a previous research conducted by Von Helversen, Abramczuk, Kopec and Nielek (2018), online review in online purchase decision is well accepted. It could attract the intended online consumer to build and earn the trust with the online seller which could determine the online consumer's decision. The review will also facilitate the increase of sale on certain product but on the other hand, it could also decrease the sale (Floyd, Freeling, Alhogail, Cho & Freling, 2014). The effect and impact of online review to the business and to the purchasing decision have been discussed by many researchers. However, there is no discussion as to whether such a review could limit the risk of being cheated and at the same time it could give protection to online customers.

The experiences gained by online buyers will be regarded as an implied precautionary measure to avoid risks on online transactions. The good and bad experiences will not only influence the purchasing decision among customers but at the same time they indirectly help to increase the seller's profits (Singh & Shoch, 2015). Shopping experience assists the online customers in gaining information particularly regarding the ability of the sellers to deliver goods within the time stipulated and the merchantability of the goods ordered. Plus, they force both buyers and sellers to be information technology savvy to be at least at par with others who are in the business. Knowledge to transfer money online, getting information about the goods tracking numbers and the ability to know how to be in contact with the deliveryman are among other things that could be acquired through shopping goods online.

## **5. Recommendations**

The Consumer Protection Act 1999 was introduced to secure the right and interest of the consumers. This Act aims to protect the consumer from misleading and false representation of goods, to uphold the safety of goods and provide implied guarantees in food production. These aims however, cannot be realized without the consumers' support. The consumers are encouraged to have knowledge and aware of their rights and protection. They also need to take certain precaution to avoid risk especially while purchasing goods online. Some of the suggestions of precautions are as follows:

### **5.1 Purchase goods from trusted online seller**

The online consumers are encouraged to shop goods from trusted online sellers to avoid fraud or undelivered goods. According to Vos et. al. (2014), previous surveys showed that online consumers would prefer to purchase goods from trusted sellers. Furthermore, Leeraphong and Mardjo (2013) reported that their respondents preferred to purchase goods from sellers whom they believed could deliver a quality good to them. Trust does not only protect the buyer but also helps the seller to develop and expand their business (Wang & Emurian, 2005). Experiences in purchasing online goods enables development of trust and confidence to order goods from trusted sellers. Bad or good experience will determine the purchasing decision and facilitates online buyers to make future purchases. Dai (2014) affirmed that, shopping experience promotes knowledge to online buyers regarding the ability of online sellers to deliver goods and supply products which meet the customer's expectation.



## **5.2 Ensure certainty of products and terms of contract**

According to the Contracts Act 1950, certainty is one of the important elements for a valid contract. The contract which is not certain either on its terms and condition or product will be void as according to section 30 of the Contract Act 1950. The advertisement of the product and the language used must be clear particularly on the descriptions of products whether it describes the products specifically or generally. This is important to enable the buyers to know any available discrepancy in the products. The buyer must read the terms and conditions before entering into a contract of purchase. However, based on previous research, consumers tend to blindly accept the terms and conditions attached on the seller's website without reading them (Elshout, Elsen, Leenheer, Loos & Luzak, 2014). This is probably because the buyers are eager to take advantage of the good bargain, they probably think the sellers are giving them good offers either in terms of the price of the goods, the design or probably the availability of the goods that meet the customer's expectation.

## **5.3 Ensure the existence of return and refund term.**

The online shoppers should ensure the online sellers have clearly stated the return and refund terms (Roshazlizawati, 2015). In the event if the online buyers received goods or products which are not fit to be used or do not correspond with their description, they have a right to make a replacement of the product, or to return it or to be refunded by the seller. In the event of the sellers not having such terms, the buyers must insist such terms to be included before they enter into any binding contracts with the sellers.

## **5.4 Read previous online reviews and rely on the reviews from previous customers**

Reading online reviews from previous consumers is another step to understand the product sold (Mayer, 2012) and to be able to know of the seller's credibility to supply goods accordingly. The buyer can determine the ability of the seller to conclude the contract by delivering the goods to the customer and at the same time the buyer can identify the quality of products before buying them (Angeliki Vosa, 2014)

## **5.5 Make known to consumers of a platform for complaints that is the National Consumer Complaints Centre (NCCC)**

According to Yilmaz, Varnali and Kasnakoglu, 2016, customer complaints are good for business for the obvious reason that the seller of the product can positively improve the product. From the perspective of a legislator, public complaints could help them to improve implementation of the main purpose of any legislation passed. This was mentioned by the President of the European Committee of Social Rights, Luis Jimena Quesada, in a training conducted on 29 January 2014 for the European Social Charter. Therefore, it is highly proposed that online shopping websites must be linked to our (NCCC) which was established in 2004 to handle complaints from consumers and suggest solutions for any issues raised as to their consumer rights.

## **5.6 New regulation which has strict requirement to fulfill before purchasing online**

All the above suggestions can easily be attained if there is a specific regulation which can control and monitor all online business activities. The highly recommended regulation should clearly contain provisions, among others, as to terms and conditions, amount of penalty if any



of the parties breach their part of the bargain, the requirement as to dispute settlement, the need to lodge a complaint to NCCC, the mandatory registration of each seller to indicate reliability and the requirement of sharing product reviews by consumers.

## 6. Conclusions

The current research focuses on the overall findings from the data analyzed in the previous section. Several recommendations also listed by the researcher were based on the research objectives. The consumer must have general knowledge as a precautionary step. Based on the findings, online purchaser needs to pay more attention to online purchase experiences in terms of perceptions concerning product information, form of payment, delivery terms, service offered, return and refund terms, privacy and search for online reviews. Reading online reviews is the most popular precautionary steps compared to online purchase experience. Previous experience of the purchaser could develop a perception towards online purchasing. Furthermore, it is important to identify a trusted online seller as credibility, trust and security are paramount. Online shoppers must identify a trustworthy website before they can decide to purchase. The current research also can give insights to the online marketer as it continuously provides user-friendly services and expedite their online business strategies. In light with the emerging trends in Malaysia, online purchasers must be smart and equip themselves with necessary precautions.

In addition, a clear and strict guideline must be available for the consumers before they start choosing items to buy online. Such a guideline should be made compulsory for all consumers to read and understand prior to agreeing anything advertised by the sellers. A much tougher requirement would be to make it mandatory for complaints to be made directly to the NCCC for a uniform solution to all issues raised regarding online purchases and for statistics purposes. The guideline should also list the amount of damages or compensation that customers can claim against the sellers who violate any of the terms and conditions agreed upon prior to the purchase. To make it fair and just, the guideline should also include the rights of the sellers in the event the buyers breach the agreement. It is hoped that all the above-mentioned suggestions will become reality to further strengthen any laws available for online shoppers and to patch any lacunae in its existence.

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## **Gamification Intervention in Teaching and Learning Accounting: ComAcc Card**

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### **Abstract**

Gamification is expected to make students hooked by the idea of the game and make them engaged in the game's idea and activity, which eventually allows for the possibility of learning process. The features of the game encourage curiosity and exploration to enhance engagement and improve content comprehension. Eventually, students will be rewarded with knowledge and skills that the game offered. The game called as ComAcc Card was triggered by the importance of students to be able to understand the components in financial statements. Failure to do so will affect the process of preparation of financial statements which is part of the course requirements. The game is expected to encourage positive student attitudes in the learning process and strengthen the students' ability to classify items according to its components in accounting. Thus, the paper presents a simple method of accounting card game introduced to the non-accounting students, and it discusses students' perception towards the use of gamification in teaching and learning process.

***Keywords:*** *Accounting, Gamification, Teaching and learning*

### **1. Introduction**

Regardless whether university's performance is measured by research or teaching quality metrics, one cannot deny the fact that universities do hold a responsibility as a place of knowledge transfer between lecturers and students since it is fundamentally seen as a place of learning. Lecturers hold a freedom in ensuring the process of knowledge transfer is executed and for that Farhad (1995) has put the position of lecturers in universities and other educational institutions as a manager. Like a manager, lecturers are expected to utilise resources made available to them to fulfil their responsibilities of delivering knowledge or skills to students (Farhad, 1995).

Along with the evolution of information technology (IT) in education, the use of gamification in the process of knowledge transfer in higher education has been widely discussed. In fact, the use of gamification in the classroom has been promoted by the government of Malaysia as it is believed to be more interesting, interactive and engaging for students (Kamil, 2016).



Previous scholars were continuously studying the linkage between the teaching evolutions with the learner's digital native profile, learner's learning styles and modern pedagogical methods (Kiryakova, Angelova & Yordanova, 2014). Hitchens and Tulloch (2018) stated that students nowadays are so used with mediated platforms, such as video games and online environment, in their formative years that it affects their learning style in the classroom. This has challenged lecturers to use other approaches besides the traditional method in executing the knowledge transfer that suit the students' current needs and preferences.

Having the power in managing resources made available by the university (Farhad, 1995) and taking a consideration of teaching and learning evolution in the current education environment have triggered the development of an accounting game called ComAcc Card. It is a teaching aid to encourage students' engagement during the execution of knowledge transfer or for students to get familiar with the terms in the teaching and learning process. It is customly made for an accounting subject. It was designed to help the non-accounting students to get familiar with the accounting terms as an early introduction for the students to prepare financial statements.

In Universiti Teknologi MARA (UiTM), an accounting subject is offered to the non-accounting students under the code ACC106 Introduction to Financial Accounting. As it is not a core subject but compulsory to certain faculties, the use of gamification is expected to encourage positive students' attitudes in the learning and teaching process rather than solely relying on the traditional method. Thus, this paper presents a simple method of accounting card game introduced to the non-accounting students. It also provides students' perceptions towards the use of gamification in the teaching and learning process.

## **2. Literature Review**

### **2.1. Learning Style**

Students come from diverse degree of motivation, commitment, ability, and learning styles or approaches (Kirkland & O'Riordan, 2008). Therefore, educational practitioners need to find alternatives for the teaching and learning process so that it can be delivered effectively. Educators have to reconsider traditional, uniform instruction methods and stress the importance of considering student learning styles in the design and delivery of course content. Studies showed that learning styles may be defined in multiple ways, depending upon one's perspective.

Brown (2000) defines learning styles as the manner in which individuals perceive and process information in learning situations. He argues that learning style preference is one aspect of learning style, and refers to the choice of one learning situation or condition over another. Celce-Murcia (2001) defines learning styles as the general approaches, for example, global or analytic, auditory or visual, that students use in acquiring a new language or in learning any other subject. Learning style is sometimes defined as the characteristic cognitive, affective, social, and physiological behaviors that serve as relatively stable indicators of how learners perceive, interact with and respond to the learning environment (MacKeracher, 2004).

A benchmark definition of learning styles is characteristic cognitive, effective and psychosocial behaviours that serve as relatively stable indicators of how learners perceive, interact with and respond to the learning environment (Curry, 1983). Learning styles are considered by many to be one factor of success in higher education but until now there is no single commonly accepted method exists, but alternatively several potential scales and classifications are in use. Most of these scales and classifications are more similar than dissimilar and focus on environmental preferences, sensory modalities, personality types, and/or cognitive styles. One



of the most important uses of learning styles is that it makes it easy for teachers to incorporate them into their teaching (Gilakjani, 2011).

The VARK questionnaire which was developed by Neil D. Flaming in 1995 uses four common modes for learner's information exchange which are visual (V), auditory (A), read / write (R) and kinaesthetic (K) learners (Brozik & Zapalska, 2006). Visual learners take in information better via colours and layout as they think in pictures and learn best in visual images. They depend on the instructor's or facilitator's non-verbal cues such as body language to help with the understanding. Sometimes, visual learners favour sitting in front of the classroom. They also take descriptive notes over the materials being presented (LdPride, 2009).

Auditory learners discover information through listening and interpreting information by the means of pitch, emphasis and speed. These individuals gain knowledge from reading out loud in the classroom and may not have a full understanding of information that is written (LdPride, 2009). The third type of learners of read/write prefer information to be printed in order for them to receive the information. Learners enjoy the lecture notes and repetitively write out the information for better understanding (Brozik & Zapalska, 2006). Whereby, kinaesthetic learners learn best with an active "hands-on" approach. These learners favour interaction with the physical world. Most of the time kinaesthetic learners have a difficult time staying on target and can become unfocused effortlessly (LdPride, 2009).

## **2.2. The Effectiveness of Gamification in Education**

Nowadays, educational system has evolved in line with changes in lifestyle. This reformation gives challenges to academicians in educating young generations to retain their attention in classroom, enhance their motivation and involvement, and at the same time providing them with fun learning experience (Zamora & Aranda, 2017). Students demand for more attractive, interesting and engaging learning medium through electronic devices, online learning and educational games. According to Maroney (2001) games is a form of play with determined objectives and structures that provide attractive and active activities which at the same time develop problem solving skills. In this new era, new term has been used that applies games structure in non-game setting called gamification (Urh, Vukovic & Jereb, 2015).

Various studies conducted in different settings have proven the effectiveness of gamification in education system. Mackey, Park, Robinson and Gabrieli (2017) who conducted a research on fifth-grade students at a charter school discovered that students' score results improved significantly after intervention of board games in the classroom. The result also revealed lower performing students gain more benefits through gamification compared to performing students. This is due to the nature of games that permit players to make mistake, learn from their mistakes and recover their mistakes by restarting the game again. A paper reviewed by De Aguilera and Mendiz (2003) on video games and education has concluded that several features of the games make it one of the most interesting teaching and learning tools. Besides encouraging book reading related to the game, it also allows wide social interaction with the surrounding players and keep the students engaged in an active activities without feeling pressured. Therefore, it stimulates students' motivation and train students to think critically and fast.

Another study by Garneli, Giannakos and Chorianopoulos (2017) suggested that games should be counted in as a pedagogical tool in engaging students in teaching and learning process. They performed a study on eighty 13-years-old students in the first grade of middle school. Their findings disclosed that students react differently towards learning through games as compared to traditional paper-based method. Students were more motivated and excited to start the game and willing to take part in the learning session which showed how



gamification can attract students' attention and keep them engage during teaching and learning process. This findings was supported by Arnold (2014) who said that gamification stimulates the mood by creating fun learning activities. He also proposed that games could help students in promoting critical thinking by applying game-like simulation through incorporation of real world situation in the game structure.

Based on previous literature, it showed that gamification is an attractive and effective medium in teaching and learning process during this century. However, educational games should be structured accordingly to meet established learning objectives with appropriate instruction, tasks, activities and operation besides suitable environment that would play a vital role in determining the effectiveness of gamification in education.

### 3. Methodology

#### 3.1. The Concept of the Game: ComAcc Card

ComAcc Card features both entertaining and educational values which capture students' attention and stimulate their motivation in the learning process through gamification, and encouraging the ability of strategizing to win the game. Multiple teaching methods are incorporated in the concept of the game especially to visual and kinaesthetic learners as the game involves visual images and accounting stimulations. Auditory and read/write learners might need further explanation upon the completion of the game but early introduction of accounting terms during traditional method could help those learners.

Cards in the game consist of two types of cards which are Question & Answer (Q&A) card and Special Card. Each Q&A card consists of two parts, a question and an answer. The questions might be presented in various way including scrabble, incomplete word, picture, business transaction and definition of an item to enhance player's ability to be creative in looking for the correct answer.



**Figure 1: The Q & A Cards for ComAcc**

To encourage the strategizing ability among players, the game provides several special cards that can be utilised whenever a player has no Q&A card to answer a question.





**Figure 2: The Special Cards for ComAcc**

There are three special cards that can be used as follows:

**Table 1: Function of the Special Cards**

Name Of Special Card	Meaning Of The Card
<b>Stop Card</b>	The next player will miss a turn and the game proceeds with the following player.
<b>Reverse Card</b>	The turn to play will immediately reverse back to the previous player and will resume according to the normal rule.
<b>Immunity Card</b>	Immunity card provides answer for all accounting components (asset, liability, revenue, expenses, drawing and capital).

The game needs at least a facilitator with minimum basic knowledge in accounting to ensure correctness of accounting component and classification. Minimum number of player is 2, but no maximum number is required. However, for easy monitoring purposes, it is recommended to have only 3-4 players at one time. Before the game starts, each player should receive 5 cards distributed randomly by the facilitator.

To start the game, take a card from undistributed card collection as the starting point. The card must be a Q&A card, not immunity or special card. Then the first player should answer the question from the first card using any of the 5 cards received before the game started. However, in any event that the players do not have the card with the correct answer, an extra card should be pulled out from the undistributed card until they find the card with the correct answer or utilise any special card. Subsequently, the second player will answer to the first player's answer card and this will continue until all players finish their cards. In answering a question, a player can pull out more than 1 card with similar answer. Where the question appears to be a business transaction, players need to justify their answers upon pulling out the answer card. In case when a special card is being used to answer a question, the player needs to put another card as a question for the next player to answer.



In case of any player wrongly answers a given question, he or she will be punished by taking an extra one card from the undistributed cards. The last card hold by the player must be a Q&A card, not an immunity or a special card. The player who first finishes his or her cards will be the winner of this game. Therefore, players should strategize their steps in playing to be the winner and at the same time applying the accounting knowledge in winning the game.

### 3.2. Instrument

In evaluating the students' perceptions towards the use of gamification in the process of teaching and learning, questionnaires were distributed and thereafter a brief interview was conducted pertaining to their experiences playing the game. A total of 105 respondents who were studying in Universiti Teknologi MARA Pahang, Kampus Raub participated in this study. The questionnaire consists of the demography, students' perceptions towards the course ACC106, and their perceptions towards the game (ComAcc Card) in terms of attention, relevance, confidence and satisfaction. A 5 point Likert Scale was used in this study ranging from strongly agree to strongly disagree.

The data collected through questionnaire were analysed using Statistical Package for Social Sciences (SPSS) with analysis involving mean value score. This study looked at four factors of students' perceptions towards the use of gamification in the teaching and learning process and each factor has its own measurements.

## 4. Results and Discussion

The results from the survey of 105 respondents of which 28% were males and the remaining were females are discussed below. For the first factor of attention, which is the learners' response to perceived instructional stimuli of the ComAcc Card, most of the students agree that the ComAcc Card does grab their attention to learn more about accounting based on the results below:

**Table 2: Mean Score for the Measurement of Attention**

1. ATTENTION	Mean
A_Q1: There was something interesting at the beginning of the game that attracts my attention.	4.27
A_Q2: The design of the game is eye-catching.	4.21
A_Q3: The concept of the game helped to hold my attention.	4.40
A_Q4: I enjoyed the game so much that I would like to know more about this topic.	4.38
A_Q5: I really enjoyed learning using the game.	4.48
A_Q6: I could relate the content of the game to things I have learned previously.	4.54

The second factor of relevance is the ability of ComAcc Card to help learners to associate their prior learning experiences with the given instruction in the gamification. It shows that gamification strengthens the understanding of the students towards the knowledge they have learned in the classroom based on the following results:



**Table 3: Mean Score for the Measurement of Relevance**

<b>2. RELEVANCE</b>	<b>Mean</b>
R_Q1: It is clear to me how the content of the game is related to things I have learned.	4.37
R_Q2: I believe the game helped me to understand the subject matterd	4.38

The third factor of students' perception towards the effectiveness of gamification in teaching and learning is confidence which reflects on learners' positive expectation towards their performance in their learning task. Based on the survey, the following results were obtained:

**Table 4: Mean Score for the Measurement of Confidence**

<b>3. CONFIDENCE</b>	<b>Mean</b>
C_Q1: The game has so much information that is was hard to pick out and remember the important points.	3.06
C_Q2: The game is so general that is was hard to keep my attention on it.	2.65

The last factor of students' perception towards the effectiveness of gamification in teaching and learning is satisfaction which reflects on learners' experience upon the completion of the gamification.

**Table 5: Mean Score for the Measurement of Satisfaction**

<b>4. SATISFACTION</b>	<b>Mean</b>
S_Q1: It felt good to successfully complete the game.	4.48
S_Q2: The game should be used in the classroom for this subject.	4.13

Based on the findings discussed above, students do find that ComAcc Card could grab their attention to be part of the process based on the features offered by the game and enhance their prior understanding pertaining to the subject matter. However, the confidence level of students towards the game is not too high perhaps due to the excessive element covered in the Q&A cards. Despite that, students are satisfied with the ComAcc Card and think that it should be adopted in the teaching and learning process. In addition, the current version of ComAcc Cards has excluded a few parts in the Q&A cards which are referred toas '*Accounting Adjustment*'.

The findings in this study are in line with Kiryakova et al. (2014) and Hitchens and Tulloch (2018) who found that gamification helps to address the problem of motivating the students to perform crucial task in the classroom such as participation during class discussion. The ComAcc Card would require explanation from players upon pulling out their card; therefore, it will indirectly make other players counter their explanation in resolving any question and enable the lecturer, being the instructor in the process, to elaborate further on some particular topics (Moncada & Moncada, 2014).

Moncada and Moncada (2014) stated that among the characteristics of well-designed gamification activities are pre-requisite knowledge or skills for the activity, a pleasing colour scheme and immediate feedback. Since the use of ComAcc Card is used only to assist the teaching and learning process without eliminating the traditional method, students have been introduced with the accounting knowledge beforehand and thus, it could strengthen their understanding. Furthermore, through interview conducted after the learning experience, one of the respondents commented on the design of the ComAcc Card as catchy and they are



comfortable with its handy size. In relation to the immediate feedback, the ComAcc Card does have the traits, as any answer provided by the player will be discussed among the players and the wrong answer will cause them a penalty.

However, based on the interview conducted there are some students who are not comfortable with such engagement offered by gamification as they consider it to be non-formal, trivial or childish. This is in line with a study by Moncada and Moncada (2014) who also conducted a study in relation to the gamification in learning accounting subject. In their study, they found that students prefer the lecturer's explanation from exercises such as discussion on past years' examination questions. This is where the function of lecturer as manager, claimed by Farhad (1995) is to properly plan and coordinate the activity in the classroom to be balanced among various types of learners.

## 5. Conclusion

The goal of this game is to provide interactive opportunities to the students where they can actively take part in the learning process instead of only listening during the lectures. The concept of the game provides an opportunity for the students to have fun and at the same time hold a brief discussion in learning accounting subject. Not only limited to the accounting knowledge, the special function holds by the special card encourage the students' ability to strategize in winning the game as well as offers them a platform to have a discussion while playing the game. Hence, that would help the students to have a better comprehension pertaining to the accounting knowledge.

Based on the survey conducted, most of the students perceived that gamification does help to improve the teaching and learning process based on the factor of attention, relevance, confidence and satisfaction. However, the lecturer must not ignore the minority group of students that are not comfortable with the environment provided by gamification and not to forget the core purpose of teaching and learning goal.

There are a few limitations in using gamification as an additional tool in teaching and learning such as limited time during the lecture hours. As being stated, the traditional method is crucial to introduce students on the accounting knowledge first, and time needed for the gamification to be held in classroom could drag the lecture plan. Thus, there are few respondents who prefer the ComAcc Card to be digitalised so that they can spend time with the game during their leisure time but this could limit the possibility of having discussion while playing the game.

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## **Factors Contributing to Mathematics Performance of UiTM Johor Students**

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### **Abstract**

Some Mathematics courses offered by the Faculty of Computer Science and Mathematics (FSKM), University Technology MARA (UiTM) Johor, such as Pre-Calculus (MAT133), Calculus I (MAT183) and Calculus II (MAT233), have been identified as high failure rate courses for recent semesters. As considered by the top management of UiTM Johor, a high failure rate course is a course with more than 25% failure rate among the students who enrolled in the course. The performance of students in these Mathematics courses is a priority to the university management as it aims to produce quality students that can graduate on time. Thus, this study investigates the factors that contribute to the students' Mathematics performance at UiTM Johor. A set of questionnaire was distributed to all students who enrolled in these courses. Descriptive analysis was conducted to analyse the demographic background of the respondents. The main analysis used Logistic Linear Regression to find out the most significant factors contributing to Mathematics performance. From the findings, SPM Additional Mathematics grades and class size were found to have significant influence on Mathematics performance of the students.

**Keywords:** Mathematics performance, SPM Mathematics grades, SPM Additional Mathematics grades, class size, extracurricular activities, English proficiency.

### **1. Introduction**

Mathematics is a foundation knowledge that is vital to everyone's life as it helps one to have



better reasoning abilities. Therefore, Mathematics is a compulsory subject in both primary and secondary schools in Malaysia. The tertiary education also offers specific type of Mathematics courses according to the field of studies. In the Faculty of Computer and Mathematical Sciences (FSKM), Universiti Teknologi MARA (UiTM) Johor, it is compulsory for the students to pass a pre-requisite course which is Pre-Calculus (MAT133) in order to enroll in the second level of Calculus course which is Calculus I (MAT183). It is also compulsory for them to pass MAT183 in order to enroll the third level of Calculus course which is Calculus II (MAT233). In order to graduate on time, students should pass these three courses within a reasonable period of time. Despite the important role of the Calculus courses, there has always been poor performance in these courses. According to the Lecturers in Charge (LICs) of these courses, MAT133, MAT183 and MAT233 courses have been identified as high failure rate courses for recent semesters. As considered by the top management of UiTM Johor, a high failure rate course is a course with more than 25% failure rate among the students who enrolled in the course. The performance of students in these Mathematics courses is a priority to the university management as it aims to produce quality students that can graduate on time. Thus, this study investigated the factors that contribute to the students' Mathematics performance at UiTM Johor.

### **1.1 Research Objectives**

The research objectives for this study are:

- i. To identify the significant factors that affect the students' Mathematics performance.
- ii. To generate a model based on the factors that affect the students' Mathematics performance.

### **1.2 Research Questions**

Based on the research objectives, this research was conducted to answer the following questions:

- i. Do factors like SPM Mathematics grades, SPM Additional Mathematics grades, class size, extracurricular activities and English proficiency affect the student's mathematics performance?
- ii. What is the model that represents the students' Mathematics performance?

### **1.3 Research Significance**

This study gives useful benefits to the faculty, lecturers and other researchers. The benefits are:

- i. To the faculty: The findings of this research could give the inputs for the faculty to determine the university requirement for Diploma entries or entries for higher level of study.
- ii. To lecturers: The findings of this research could explain several aspects which should be considered by the lecturers to improve the existing mathematics courses.



- iii. To researchers: There is lack of research focusing on extracurricular activities and English proficiency to determine students' Mathematic performance. As such, this study will contribute knowledge or ideas to researchers to conduct further studies on this issue

#### **1.4 Research Hypotheses**

Based on the research question discussed earlier, the five hypotheses to be tested are:

- i. SPM Mathematics grades contribute significantly to students' Mathematics performance.
- ii. SPM Additional Mathematics grades contribute significantly to students' Mathematics performance.
- iii. Class size contributes significantly to students' Mathematics performance.
- iv. Extracurricular activities contribute significantly to students' Mathematics performance.
- v. English proficiency contributes significantly to students' Mathematics performance.

#### **1.5 Limitation of study**

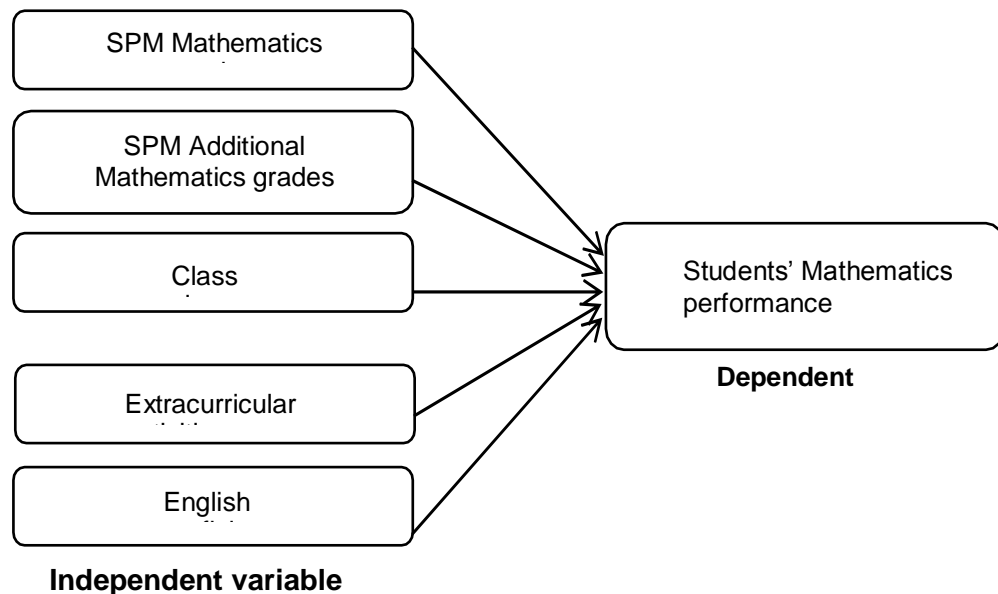
There are several limitations throughout of this study.

- i. This study only focused on students at UiTM Johor. Thus, it does not represent the whole population of universities in Malaysia.
- ii. Not many local journals or researches – variables used might not be suitable in Malaysia.
- iii. In this research, only student factor which comprises the five independent variables were considered. Thus, in other research, other factors such as teacher factor and environmental factor that include family, friends and facilities should be included to study students' Mathematics performance.
- iv. This study only focus on Pre-Calculus (MAT133) achievement since this is the first level of the mathematics courses. For further research, other mathematics course achievements which also have high failure rate such as Calculus 1 (MAT183) and Calculus II (MAT233) can be discussed.

#### **1.6 Theoretical framework**

Figure 1 shows the theoretical framework of the study. It shows the linkage between different factors in students' Mathematics performance as dependent variable is related to the independent variables which are SPM Mathematics grades, SPM Additional Mathematics grades, class size, extracurricular activities and English proficiency.





**Figure 1: Theoretical Framework**

## 2. Literature Review

The high failure rate in Mathematics courses is influenced by many factors such as teacher factor, student factor and environmental factor (Suan, 2014). Therefore, there are many factors that could affect the Mathematics performance of students of UiTM Johor. Thus, this research is conducted to help the university management to identify whether the factors of classroom settings, basic Mathematics knowledge, English proficiency and participation in extracurricular activities contribute to the students' Mathematics performance.

### 2.1 Class Size

Jarvis (2002) conducted a research to look at the impact of class setting towards Mathematics performance. From the study, it was found that class size is not a significant factor toward Mathematics performance but the teacher-size interaction effect is weakly significant. On the other hand, Finn and Achilles (1990) found that in the early primary grades, small classes perform better in reading and mathematics compared to the larger classes. Referring to Blatchford (2009), class size had been determined as one of the contributing factors of achievement in both literacy and Mathematics.

### 2.2 SPM Mathematics and Additional Mathematics Grades

Many researches acknowledged the importance of basic Mathematics knowledge in high school in order to understand the new mathematics course offered in higher institution level. According to Yudariah and Roselainy (1997), students who did not performed in the first year mathematics courses in the university level are among the ones who did poorly in their Sijil Pelajaran Malaysia (SPM) Additional Mathematics or did not take the subject at all. Moreover, Tang et.al (2009) found SPM Mathematics grades as one of the contributing factors of all



underachievements in Mathematics courses. In addition, Gynnild et al. (2005) revealed that one of the three major reasons students fail in Calculus courses is because of lack of basic skills and knowledge in Mathematics.

### **2.3 SPM English Grade**

There is lack of research which studied English proficiency among the students as a contributing factor for underachievement in Mathematics courses. However, the findings found by Junaidi and Mohd (2010) in their study proved that during the period of the implementation of teaching and learning Science and Mathematics subjects in English especially in the rural vernacular schools, the achievements in Science and Mathematics subjects declined in the consecutive years. Since the medium of language in UiTM is English, the achievement of the students in Mathematics course may also be affected by the proficiencies in English among the students. Research conducted by Sahragard et al. (2011) also suggested that the students who scored higher on the English language proficiency test had better GPA scores. Al-Haddad et al. (2004) revealed that there exists a relationship between English proficiency and accounting students' academic performance in the case of limited English proficient students.

### **2.4 Extracurricular activities**

Extracurricular activities play an important role in determining students' mathematic performance. According to Daniyal et al. (2012), it is found that co-curricular activities improve the academic performance of students. Moreover, Stephens and Schaben (2002) also found that co-curricular activities have positive impact on Grade Point Average (GPA) in which students who actively contribute in the co-curricular activities are more likely to have a GPA of 3.0 or more as compared to those who are not involved in co-curricular activities. Darling et al. (2005) also found the association between the involvement in co-curricular activities and the enhancement in the performance of the students in their academics. Interestingly, Marsh and Kleitman (2002) revealed that the more you spend time in leisure activities the poorer academic performance and poorer working habits are developed, while the more time you spend in formal activities like sports, debate and drama activities, the better grades you get in your studies.

Thus, this research discusses the students' Mathematic performance according to the five factors which are SPM Additional Mathematics grades, SPM Mathematics grades, SPM English grades, class size, and extracurricular activities. Specifically, this study describes the performance in Pre-Calculus course (MAT133) among the students of the Faculty of Computer and Mathematical Sciences. This study gives valuable inputs to the faculty and also the lecturers to assist the students to pass and simultaneously get good grades in the Mathematics courses.

## **3. Methodology**

This section discusses some general information about the nature of study and the statistical method applied in running the analysis to accomplish the objectives of this study. Brief explanations on these methods are discussed in this section.



### 3.1 Research Design

This study was conducted using a quantitative approach. The population was Semester 1 diploma students in Mathematical Sciences (CS143) and diploma students in Computer Sciences (CS110) who enrolled in MAT 133 course at UiTM Johor. 253 students in the population have been selected according to their registered course groups. Next, Ordinal Linear Regression was employed to find the best model which represents the students' Mathematics performance at UiTM Johor.

### 3.2 Instrument

For this study, a survey method was used to collect data. A self-administered questionnaire was distributed to the respondents to collect responses within a short period of time (Sekaran & Bougie, 2013). The questionnaire was divided into two parts that are Section 1 for questions on demographic background of the respondents and Section 2 for questions to measure the students' Mathematics performance.

### 3.3 Data analysis method

#### 3.3.1 Descriptive Analysis

As initial steps of analysis, the descriptive measure of the data was carried out to describe basic features of the data for the demographic background of the respondents.

#### 3.3.2 Logistic Regression

In this study, a logistic regression was used to analyse the related factors to the respondents' performance in Pre-Calculus course (MAT133). A logistic regression model was used because the dependent variable has two categories that are good and poor performance in MAT133. The independent variables are SPM Additional Mathematics grades, SPM Mathematics grades, SPM English grades, class size, and extracurricular activities.

For a binary dependent variable,  $y$  logistic regression model can be used to study the effect of the categorical independent variables,  $x$ . In this model, the dependent variable has two categories and with a set of independent variables. The simple form of logistic regression model or logit with a single independent variable can be expressed as:

$$\text{logit}[\pi(x)] = \log \left( \frac{p}{1-p} \right) = \alpha + \beta x$$

where  $p$  is the 'success' probability of  $y$  at value of  $x$ .  $\frac{p}{1-p}$  denotes whether  $p$  is increasing or decreasing as  $x$  increases. Logit or log of odds is used to measure the chance that an event will occur. In other words, it is the probability that success will occur divided by the probability



that success will not occur. The logit of the multiple regression with a collection of  $m$  independent variables  $x_1, x_2, \dots, x_m$  is given by

$$\text{logit}[p] = \alpha + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_m x_m$$

where  $\beta_i$  indicates the coefficient of  $i$  independent variables.

### 3.3.3 Odds Ratio

Odd is the ratio of the probability that an event of interest occurs to the probability that it does not occur. The odd can be computed by using the following formula:

$$\text{odd} = \frac{P(X)}{1 - P(X)} \quad \text{where } P(X) = \text{probability of an event will occur}$$

Odds ratio is a measure of strength of association between an exposure and an outcome. The odds ratio is the odds that an outcome will occur given a particular exposure.

The ratio of odds of event A to the event B can be computed by using the following formula:

$$\text{odd ratio} = \frac{\text{odd}(A)}{\text{odd}(B)} = \exp(\beta)$$

## 3.4 Model Evaluation Criteria

In logistic regression model, there are five criteria of model evaluation which consists of Omnibus Test of Model Coefficient, Hosmer and Lemeshow Test, Predictive Efficiency Model, Wald Statistics and Cox and Snell R<sup>2</sup> and Nagelkerke R<sup>2</sup>. The used of each test will be discussed in the next section.

### 3.4.1 Omnibus Test of Model Coefficient

Omnibus test is used to test whether the explained variance in a data set is significantly greater than the unexplained variance. The test is a likelihood ratio chi-square test of the current model versus the null model. The significance value of less than 0.05 of the test indicates that the current model outperforms the null model.

### 3.4.2 Hosmer and Lemeshow Test

The Hosmer and Lemeshow test is a statistical test for goodness of fit for the logistic regression. This test tells how well a set of data fits the model. Specifically, the test calculates if the observed event rates match the expected event rates in population subgroups. Like most of goodness fit test, the significance value of less than 0.05 means that the model is a poor fit.

### 3.4.3 Predictive Efficiency Model

Another way of evaluating the fit of logistic regression model is by using Classification Table.



The Classification Table describes the proportion of cases that have managed to figure out correctly. It also describes how many of the cases where observed values of the dependent variable were 1 or 0 respectively have been correctly predicted. Overall percentage equal or more than 70% indicates that it is a good predictive efficiency. Besides using overall percentage to evaluate the predictive model efficiency, sensitivity and specificity can also be used. Sensitivity indicates the percentage of students who pass this subject and the model is going to predict which student will pass this subject. While specificity is the percentage who actually fail and the model is able to predict which student will fail the subject.

#### **3.4.4 Wald Statistics**

Wald test is used to determine whether a certain predictor variable is significant or not. The Wald test statistics is the ratio of the square of the regression coefficient to the square of the standard error of the respective predictor and is asymptotically distributed as a chi-square distribution. The easiest way to assess Wald test, if significance values is less than  $\alpha = 0.05$ , thus accepts the alternative hypothesis as the variable make a significant contribution.

#### **3.4.5 Cox and Snell R<sup>2</sup> and Nagelkerke R<sup>2</sup>**

The use of this method is to provide an indication of the amount of variation in outcome variable explained by the model and can be thought of as a measure of how poorly the model fits such as lack of fit between observed and predicted values. There are two modified versions of this method, one developed by Cox and Snell R-square and the other developed by Nagelkerke R-square. The Cox and Snell R-square has an upper bound that is less than 1.0. Meanwhile, Nagelkerke R-square range is from 0 to 1 which is a more reliable measure of the relationship. Nagelkerke R-square will be higher than Cox and Snell measure.

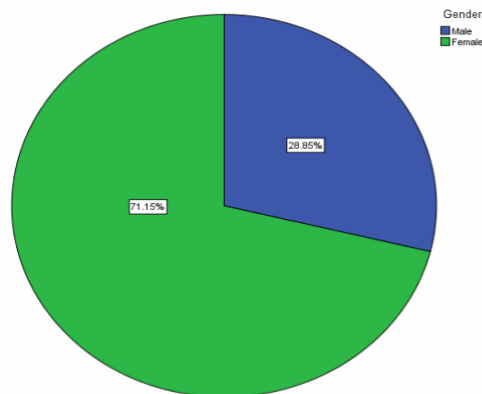
### **4. Results and Discussion**

This section discusses the results and explanation on the research findings. Data are analysed in order to obtain the factors contributing to students' mathematics performance. A number of tests were conducted to evaluate the model.

#### **4.1 Descriptive Analysis**

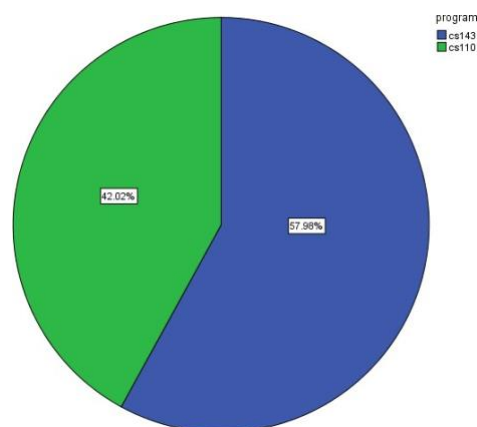
The percentage of respondents based on gender and programme is as follows:





**Figure 1:** Percentage of Respondents Based on Gender

71.15% of the respondents were female while another 28.85% of the respondents were male students.



**Figure 2 :** Percentage of Respondents Based on Programme

57.98% of the respondents were from CS143 programme while another 42.02% of the respondents were from CS110 programme.



**Table 1: Description of Variables**

Variable name	Variable Type	Description of code
Mathematics performance	Ordinal	0 = fail 1 = pass (A+ to C indicate as pass meanwhile C- and below denote fail.
SPM Mathematics grades, SPM Additional Mathematics grades and SPM English grades	Ordinal	0 = distinction (A+ to A-) 1 = credit (B+ to C) 2 = pass (D and E) 3 = fail (G)
Class size	Ordinal	0 = 15 or less (small) 1 = 16 – 25 (medium) 2 = 26 -35 (big) 3 = 36 or more (very big)
Extracurricular activities	nominal	0 = yes 1 = no

## 4.2 Factors Contributing to Mathematics Performance

### 4.2.1 Logistic Regression Model

Variabe	Estimate coefficient	p-value
Constant	-3.491	0.002
SPM_AMath Credit	-2.077	0.060
SPM_AMath Pass	-1.324	0.006
SPM_English Distinction	0.169	0.727
Class_Size Medium	-16.437	0.999
Class_Size Large	3.568	0.001
Extra_Curricular (No)	-0.616	0.203

Estimated Model:

Log it [ Z = 1] = -3.491 -2.077 SPM\_AMath Credit -1.324SPM\_AMath Pass + 0.169 SPM\_English Distinction -16.437 Class\_Size Medium +3.568 Class\_Size Large - 0.616 Extra\_Curricular (No)

### 4.2.2 Odds Ratio

Variable	Odd Ratio
SPM_AMath Credit	0.125
SPM_AMath Pass	0.266
SPM_English Credit	1.184
Class_Size Medium	0
Class_Size Large	35.446
Extra_Curricular (No)	0.540



Based on odds ratio value in the table above, it can be said that the students with distinction are 0.125 times more likely than those with credit SPM Additional Mathematics to pass MAT133. Besides that, the students with distinction are 1.184 times more likely than those with credit SPM English to pass MAT133. The odds ratio of students who are in medium size class is 35.446 times more likely to pass MAT133 than those who in the large size class. The odds ratio of students who join extracurricular activities is 0.540 times more likely to pass MAT133 than those who do not involve in extracurricular activities.

#### 4.2.3 Omnibus Test of Model Coefficient

p-value	0.000
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Based on the result, it can be concluded that the information from the independent variables allows for better prediction of the factors contributing to the mathematics performance.

#### 4.2.4 Hosmer and Lemeshow Test

p-value	0.597
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The Hosmer and Lemeshow tests the null hypothesis that the data fits the model. The result of the Hosmer and Lemeshow Test shows that we failed to reject null hypothesis. Thus, it suggests that the logistic regression model is good fit for the data since p-value is  $>0.05$ .

#### 4.2.5 Predictive Efficiency Model

Sensitivity	Specificity	Overall percentage
97.8	22.2	89.7

As can be seen in the above table, overall accuracy of the model to predict the factor contributes to mathematics performance is a good predictive efficiency since the overall percentage of the model is 89.7%. While the sensitivity is given by 97.8% , the specificity is 22.2%.

#### 4.2.6 Wald Statistics

Wald statistics shows the statistical significant of the predictor variable. From the table below, it can be concluded that students with credit SPM Additional Mathematics and study in large classroom size significantly influence the students to perform well in MAT133 since the p-values are  $<0.05$ .

Variable	Estimate coefficient	p-value
SPM_AMath Credit	7.620	.006
SPM_AMath Pass	3.529	.060
SPM_English Distinction	0.122	.727
Class_Size Medium	0	.999
Class_Size Large	11.870	.001
Extra_Curricular (No)	1.624	.203



#### 4.2.7 Cox and Snell R<sup>2</sup> and Nagelkerke R<sup>2</sup>

It can be seen from the table below that Cox and Snell R squared is 0.19 and Nagekerke R squared is 0.386. Hence, it can be said that both R squared values indicate that the total variation of the factors contributed to MAT133 performance is about 19% and 38.6% explained by all factors included in the model.

Cox and Snell R <sup>2</sup>	Nagelkerke R <sup>2</sup>
0.190	0.386

### 5. Literature Review

The factors that contribute to students to pass MAT133 course are good result in SPM Additional Mathematics and class size of not more than 35 students. This result was consistent with research by Tang et.al (2009). Thus, it is recommended that a strong grade in SPM Additional Mathematics should be one of the eligibility requirements for future Science-based student intake. Having only SPM Mathematics background is not enough for Science-based students to survive in advanced Mathematics of tertiary education. The top management of the faculty should also be concerned on class size where the class size should be not so large. This is important because students taking MAT133 are in transition period from school to university and may fail to cope in large class size. Meanwhile, the other two factors, English proficiency and extracurricular activities, seem to not be significant. Future research can be carried out for all levels of students which consist of students who have taken the second and the third level of Calculus course. Additionally, a larger sample size and other factors which are not studied in this research also should be considered.

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## Exploring Factors Affecting Public Acceptance Towards Tax Reform in Malaysia

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### Abstract

Within three years, Malaysia has undergone two consumption tax reforms: Goods and Services Tax (GST) on the 1st of April 2015, and Sales and Services Tax (SST 2.0) on the 1st of September 2018. Although tax reform is important to revenue collection, public acceptance of the newly tax reform is crucial to ensure its success. Public acceptance may be affected by tax instrument employed by the new tax system. Reversal Theory was used as the underlying theory for the study. Thus, this study aims to explore factors that influence public acceptance towards tax reform in Malaysia. Semi-structured interview sessions were conducted among lower and middle-income earners to obtain information on the extent of public acceptance of the consumption tax reform. From the interview sessions, three factors were identified namely monitoring roles by government agencies, effect of price of the good and tax awareness among the public. The findings are important for the government to take the initiative to improve the mechanism of the new tax reform in order to promote tax fairness among the public from different income levels. In addition, the findings are vital for the tax authority to improve their monitoring role and to rectify their administrative issues in order to efficiently implement tax reform in Malaysia.

**Keywords:** Consumption tax reform, Good and Service Tax, Sales and Service Tax 2.0, public acceptance.



## 1. Introduction

A consumption tax is a broad category of tax that is levied on the consumption value of goods and services. Consumption tax could be implemented in various ways including sales tax, excise tax, goods and services tax and import duties (Keen, 2006; Poterba, 2008; Dordevic, 2015; Boadway & Song, 2016). Consumption taxes are paid by the consumers rather than businesses. Tax is originally paid by a business that passes to the consumer inclusive in selling price (Ahmad, Ismail & Abdul., 2016; Hines, 2007; Keen, 2006; McClellan, 2013; Saira, Zariyawati & May, 2010). In other words, consumption taxes are not collected by the government directly from consumers (Dordevic, 2015). Tax is collected by vendors at the retail level, who then pay to the tax authority; namely the Royal Malaysian Customs Department (RMCD). Two types of consumption taxes, Goods and Services Tax, and Sales and Services Tax, will be discussed in this article.

GST rate was reduced from 6% to 0% from 1st June 2018, while goods and services listed in the Goods and Services Tax (Exempt Supply) Order 2014 will remain exempted (BERNAMA, 2018). The tax holiday ended on 1<sup>st</sup> September 2018 by the reintroduction of the Sales and Services Tax (SST 2.0). The Prime Minister, Tun Dr Mahathir Mohamad said that the government needs to bring back sales tax to replace GST as an alternative source of revenue to the country. SST 2.0 is expected to create more disposable income which in turn will help to boost consumer spending and business activities. The SST 2.0 rate was fixed at 5-10% for goods and 6% for services. On 31<sup>st</sup> July 2018, the Government tabled five Bills to repeal the GST for its first reading in Parliament. The Bills are not just to abolish the GST but also to reintroduce the Sales Tax Bill 2018 and the Services Tax Bill 2018. Besides, it is also to propose for charging, levying and collection of Sales Tax. The five Bills – GST (Repeal) Bill 2018, Sales Tax Bill 2018, Service Tax Bill 2018, Customs (Amendment) Bill 2018 and the Free Zones (Amendment) Bill 2018 – were tabled by the Deputy Finance Minister, Datuk Amiruddin Hamzah. The RMCD Director-General, Datuk Seri Subromaniam Tholasy explained that a total of 6,400 will be charged under the new SST compared with 11,197 under the GST. Sales and Services Tax comprises two legislations. The Sales Tax is imposed on the manufacturing sector and governed by the Sales Tax Act 2018. Service Tax is imposed on selected service sectors, with one of the most notable ones being the food and beverage (F&B) service providers. The Service Tax Act 2018 would govern the selected service providers and the details would be gazetted in the subsidiary legislation, PU(A) Service Tax Regulations 2018.

Sales Tax is imposed one time to the manufacturing company when there is a sale to the trading company. There is no sales tax imposed from the trading company to the next supply chain; the suppliers. Thus, the consumers will expect that the price of goods are much lower as compared to the GST. On the other hand, GST mechanism is on value-added concept with input tax available as deduction. The supply chain moving from manufacturers, distributors, dealers and consumers would result in higher price. GST input tax is available as a credit or deduction against output tax based on tax invoice received from GST registrant suppliers. This would mean that GST is never a business cost as deduction is available against output tax even though there is no sales generated. Sales Tax on the other hand, would be paid by the trading company purchasing goods from the manufacturing company, incurred business cost and deduction is only available when there is a sale. This would mean that business cost would be higher as Sales Tax is part of the inventory cost and to be deducted as cost of sales when goods are sold or exported. In simple terms, no sales, no deductions (The Star, 2018 'GST vs SST, Which Is Better'). Unfortunately, the main issue with GST was its delays in refunds. As revealed by the Ministry of Finance, GST problem is when the refunds are not paid on time. It compounds the effect and leads to increase in price of goods and cost of living. Technically, each supplier can claim back GST



as an input tax from the government. The delays caused the costs to the businesses. This is why prices have escalated all the way and burdened the people (News Straits Times 2018, Malaysia needs time to adjust SST).

Based on the arguments listed above, the objective of this paper is to explore the factors affecting public acceptance towards consumption tax reform in Malaysia to Sales and Services Tax 2.0. Based on the interview conducted in September 2018, price, monitoring activities and tax awareness are among the pertinent factors that will lead to public acceptance towards SST 2.0. The findings will enable the government to undertake measures for a smooth and effective consumption tax reform. This includes enhancing the current support system and enforcement. Having this information will assist the tax authority to focus on possible ways to improve the tax awareness among consumers in Malaysia. In this regard, the approach taken would be problem solving-oriented with the intention to resolve the issue identified rather than to overhaul the whole consumption tax system.

The remainder of this study is organized as follows: Section 2 provides an overview of the issues on consumption tax in Malaysia, while Section 3 reviews the existing literature on the consumption tax. Section 4 presents the research methodology. Section 5 reports and discusses the results, and Section 6 concludes and discusses the implications of the study.

## 2. Issues on Consumption Tax

GST system affects the wealth distribution among consumers in three aspects: (i) changes in consumers' spending pattern, (ii) rise of financial burden for households, and (iii) the burden of GST on the categories of spending (Kasipillai & Sinnakkannu, 2008). Besides, the businesses have vast room of chances to hike up the price of products and services. It eventually leads to inflation and will burden the people. Thus, most households from the middle and lower-income groups may experience a higher financial burden as compared to higher income earners (Alappatt & Shaikh, 2014; Palil & Ibrahim, 2012)

On the other hand, SST is not transparent to the consumers. The taxes are embedded in the cost of goods and services (RMCD, 2018). It will affect all the supply chain resulting in cascading effect (Dhond, 2010; Keen, 2014; Kumar & Sarkar, 2016; Yong, 2018; Wong & Kee, 2018). Without knowing the actual tax charged, the consumers must bear higher cost of purchase price of the goods consumed. SST is a part of regressive tax. Furthermore, a regressive tax inflicts a greater burden on poor people due to it leading to larger spending expenses on goods consumed of the lower-income level. Prices would generally be reduced for goods in SST but there could be a spike in the prices of some essential goods. It includes the cost or charges for services rendered if no serious steps are taken to monitor and control it. On top of that, the Ministry of Domestic Trade and Consumer Affairs have received about 2,000 daily complaints from the public since the Sales and Services Tax (SST 2.0) was implemented. Its minister, Datuk Saifuddin Nasution Ismail, said 50 per cent of the total complaints received were related to food and beverages prices (Astro Awani, 2018 'KPDNHEP Terima 2,000 Aduan Setiap Hari Selepas Pelaksanaan SST').

The empirical findings revealed that the level of understanding and awareness among Malaysians toward consumption tax was found to be generally low (Alias, 2016; Shamsuddin et al., 2014)). It has been reported that consumers had diverse opinions over the implementation of consumption tax and most of them failed to understand the implications and benefits of the tax on goods, services, businesses and socio-economic development (Ling, Osman, Arman Hadi, Muhammad Safizal & Rana, 2016; Shafie, Kamilah & Tham., 2016; Shamsuddin et al., 2014).



## 2.1 Sales and Services Tax 2.0

### 2.1.1 Sales Tax

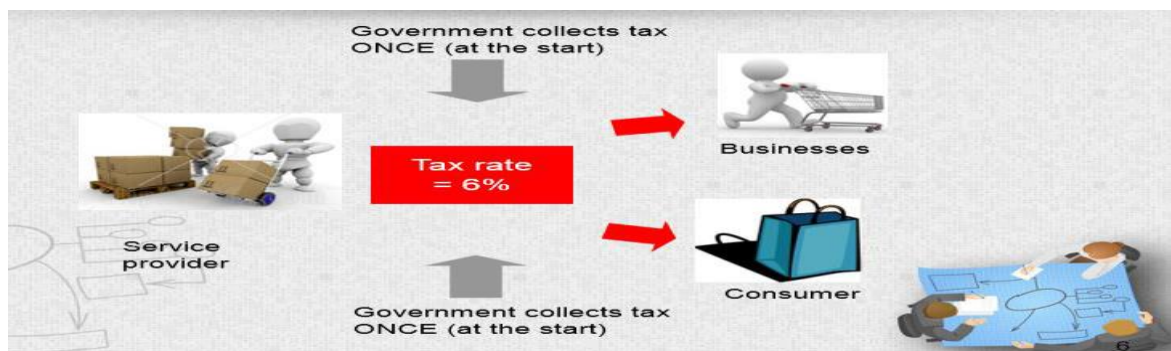
Sales Tax Act 2018 applies throughout Malaysia, excluding some designated areas and special areas. Sales tax is a single stage tax levied and charged on all taxable goods manufactured in or imported into Malaysia. Sales tax is an ad valorem tax and different rates apply based on group of taxable goods. Sales tax for petroleum is charged on a specific rate which is different from other taxable goods. Taxable goods are goods of a class or kind not for the time being exempted from sales tax. Goods exempted from sales tax are listed in Schedule A of the Sales Tax (Goods Exempted from Sales Tax) Order 2018 (Royal Malaysian Customs Department, 2018). Figure 1 shows how the SST work through the supply chain from the manufacturer up to the consumer. It shows that the government only collects tax at the manufacturer's level but the element of sales tax is embedded in the price paid by the consumer.



**Figure 1: How Sales Tax works (RMCD, 2018)**

### 2.2.1 Service Tax

Service tax in Malaysia is a form of indirect single stage tax imposed on specified services termed as “taxable services”. Service tax cannot be levied on any service which is not included in the list of taxable services prescribed by the Minister under First Schedule of the Service Tax Regulations 2018. Service tax applies to certain prescribed goods and services in Malaysia including foods, drinks and tobacco. The Service Tax Act 2018 (STA 2018) applies throughout Malaysia excluding some designated areas, free zones, licensed warehouses, licensed manufacturing warehouses and Joint Development Area (JDA). The rate of service tax is 6 per cent of the price or premium for insurance policy, value of betting and gaming, etc. of the taxable service as determined under section 9 of STA 2018. Figure 2 explains the implementation of service tax in Malaysia.



**Figure 2: How Service Tax works (RMCD, 2018)**



The RMCD has also drawn up a proposed list of services subjected to six per cent service tax under SST. These included hotels and homestay operators as well as Pay-TV, telecommunication, insurance and takaful service providers. It means that consumers will be charged a 6 per cent service tax on their monthly Astro bill as well as on their insurance premiums. RMCD has also proposed that RM25 tax per annum will be levied upon the issuance of every principal or supplementary credit or charge card. Professional services such as legal, accounting, surveying, architectural, valuation and engineering will also be subjected to the service tax. Restaurant operators, including hawkers and food truck operators, must also pay the service tax. However, the SST will only be applicable to individuals and businesses that make more than RM500,000 annually. This threshold level is the same as GST threshold level. Datuk Seri Subromaniam Tholasy, Customs Director-General explained that the department's proposal will be scrutinised by the Cabinet in the Parliament.

### **3. Literature Review**

There are three principles underlying in a tax instrument: efficiency, equity and administrability (Bardai, 1988; Avi-Yonah, 2006). An efficient tax system should be simple and convenient towards taxpayers, tax agents and public at large (Bardai, 1988). To enhance the public acceptance, the consumption tax should be fair to people from all levels of income (Lesch, 2018). However, the implementation of tax regime itself is hard to fulfill the tax principles mentioned. The public does not fully support the taxation introduced by the government as the burden will be on their shoulders.

Public acceptance is vital because when the consumers reject the tax, the government will suffer from the loss of expected revenue (Bidin & Othman., 2014 & Saad, 2013). Besides, the government's decision to reform the consumption tax in Malaysia from GST to SST 2.0 can be costly due to the experiences during the implementation GST (Azmi et al., 2016; Palil et al., 2013). Malaysian citizens are not entirely convinced with the consumption tax scheme (Syazwani, Fadzillah & Hussin, 2016; Othman et al., 2017; Goh, Huei & Tay, 2017). In addition, studies also reported that the consumers had diverse opinions on consumption tax. They failed to really understand the advantages of its implementation (Saira et al., 2010; Shamsuddin et al., 2014). Scholars also reiterated that low awareness and confusion on consumption tax charges experienced by the consumers as among the main factors that lead to discouragement of consumption tax (Ling et al., 2016; Palil et al., 2012; Saira et al., 2010; Shafie et al., 2016; Shamsuddin et al., 2014). The regressivity nature of consumption tax will affect most households from the middle and lower-income groups. They may experience a higher financial burden in comparison to higher income earners (Palil & Ibrahim, 2012; Alappatt & Shaikh, 2014; Ling et al., 2016). Ahmad et al, (2016) stated the negative perception of consumers to consumption tax was due to information leakage on the goods and services that are exempted and also the volatility of products' price.

For this study, the principles of tax instrument are identified. The efficiency and administrability were themed under monitoring activities. The argument on price fairness that was argued by the respondents is a proxy for equity. Tax awareness is another factor that will affect the public acceptance towards consumption tax reform in Malaysia.

#### **3.1 Efficient Monitoring**

Public acceptance towards consumption tax reform will be influenced by the efficient monitoring function by the government agencies or tax authorities. Consumers believe that the government especially RMCD should strictly enhance their monitoring roles in



implementing the consumption tax. Monitoring is vital in ensuring the success of the implementation of SST 2.0 (James, 2015; Badinski & Bakija, 2014; McClellan, 2013; Guyton, Manoli & Payne 2018). Many businesses will take advantage by raising prices if the monitoring activities are lacking. Among the misbehaviours done by the businesses in previous GST era was adding on the input tax to the costs of goods sold. They were not supposed to do so as it is claimable. The acceptance towards consumption tax will be low if the tax system is inefficient because of a limited number of taxpayers, lack of modern administration, and high level of avoidance. These are due to the system being outdated and complicated, and having poor collection procedure (Amir, Asafu-Adjaye & Ducpham., 2013). The key to the success of tax reform in United Kingdom and New Zealand is effective consultation prior implementation. Besides, it is also important that the reform is seen to be fair through monitoring activities conducted (James & Alley, 2008). American Institute of CPAs (AICPA, 2017) in their Guiding Principles of Good Tax Policy: A Framework for Evaluating Tax Proposals explained that an efficient and administrability tax system should keep to a minimum cost to collect tax. These costs include the administrative cost to the government that is influenced by the number of revenue officers necessary to administer the tax. Consideration of taxpayer compliance costs is also a must. Currently, Malaysia is practising the Price Control and Anti-Profiteering Act 2011 (Act 723). Section 14 of the act clearly states any person, who, during trade or business, “profiteers” in selling or offering to sell or supplying or offering to supply any goods or services, is considered as committing an offence. According to the act, the word “profiteer” means making unreasonably high profit. According to the act, any person who commits any offence under such situation, on conviction, shall be liable: (a) where such person is a corporate body, to a fine not exceeding RM500,000. Second or subsequent offence, to a fine not exceeding RM1 million; or (b) where such person is not a corporate body, to a fine not exceeding RM100,000 or imprisonment for a term not exceeding three years or both. The common problem faced by the tax administrative is usually due to the unfamiliarity with the new system (Othman et al., 2017). Thus, the administrative may need time not only to familiarise themselves with the whole system, but also to reassess their approaches in managing the emerging issues (Takril & Sanusi, 2014; Shagari, 2014).

### 3.2 Price Fairness

Tax fairness is important as it will increase the acceptance of consumers towards tax systems (Peggy, 2013), especially in consumption tax (Dordevic, 2015). Consumers perceived fairness by means of the price fairness of goods and services will affect their spending pattern (Daskalopoulou & Petrou, 2006). The tax should be perceived as fair, so the consumers will support the system and show their acceptance (Saad, 2011). The term “fairness” is quite impossible to define as it is subjective to the level of interpretation of an individual (AICPA, 2017; Jimenez & Iyer, 2016). The public hope to see prices of goods and services fall as a result on the tax reform as only 38 per cent of the goods and services in the Consumer Price Index (CPI) basket are taxable compared to 60 per cent under the GST. It is estimated that up to RM70 billion will be freed up to allow consumers to spend more. Under the GST regime, a total of 11,197 goods were imposed the 6 per cent tax. In comparison, only 5,612 goods are subjected to sales tax in SST 2.0.

Vertical equity and fairness are interpreted as ability of individual to bear the tax burden (AICPA, 2017). Lower and middle-income earners might face more burden in consumption tax as compared to high-income level (Kaplanogou & Newbery, 2008; Anushuya & Pal, 2014; Castro, 2014; Jose, 2014) as the rate for GST and SST 2.0 is equally charged regardless the income of the households. The main concern of the public is that the prices of goods and services are getting higher after the consumption tax reform took place. Prices should be lower compared to GST as the SST 2.0 only applies to 38 per cent of selected



goods and services compared to GST which taxed some 60 per cent of basket goods and services. Another fear is that the public have to pay the sales and services tax on top of prices which have included the GST before.

### **3.3 Tax awareness**

The influence of tax awareness on compliance behaviour has been discussed by many research (Palil, 2010; Saad, 2011; Farrar, 2011)). It is believed that the tax system must be smooth in operational and acknowledged by the consumers to enhance the acceptability (Hamid, et al., 2016). Lacking in awareness of consumption tax being implemented in Malaysia has led to shudders among the society (Saifi, Suhaily & Shuhaimi, 2015). Knowledge on taxation may influence the compliance and awareness on the tax collection being spent by the government (Moomal & Zakaria, 2014). Besides, by educating consumers with tax awareness, it will enhance public acceptance (Hambali & Kamaludin, 2017). The empirical findings revealed that the level of understanding and awareness among Malaysians toward consumption tax is generally low (Kamarudin & Mustapha, 2017; Normahayu et al., 2015; Suriana et al., 2015; Shafie et al., 2016; Rashid et al., 2015). This indeed reflects that the majority of Malaysian consumers are still confused and lack knowledge of consumption tax. It will directly influence their perception and level of acceptance of consumption tax as a whole. Even those who have been exposed to the technical aspect of consumption tax are still unsure on how the tax works (Harun, Hamid & Yahya, 2017).

### **3.4 Reversal Theory**

Reversal Theory is used in order to provide a comprehensive picture of the acceptability amongst Malaysians towards indirect tax reform implemented in Malaysia. The Reversal Theory has been established as a dominant theory in explaining one's behaviour, which refers to acceptance in this study (Apter, 2005). There are four pairs of domains in this theory: means-ends, rules, transactions and relationships. Each pair in a domain represents two opposite forms of people's motivation.

- Means-Ends – The first pair is called "Telic" (or "Serious") and "Paratelic" (or "Playful") and refer to whether one is motivated by achievement and future goals, or the enjoyment of process in the moment.
- Rules - The next pair is called "Conforming" and "Rebellious" (or "Negativistic") and refers to whether one enjoys operating within rules and expectations, or whether one wishes to be free and push against these structures.
- Transactions – This pair represents "Mastery" and "Sympathy" and relates to whether one is motivated by transacting power and control, or by care and compassion.
- Relationships - The final pair is called "Autic" (or "Self") and "Alloic" (or "Other") and refers to whether one is motivated by self-interests (personal accountability and responsibility) or by the interests of others (altruism and transcendence).

The domain chosen in this study is 'rules' which is explained as any kind of constraint, expectation, convention or routine that directs a person and delineates what he or she should do in a given situation. The two states of this domain are conformist and negativistic. It is typical to obey rules most of the time, since they give life structure and meaning, apart from helping us to feel that we belong in situations where we know what is expected of us – which refers to most situations that we come across in our daily lives. In the situation of indirect tax implementation, the government needs to cushion the revenue collection, and when the public agrees to the intention, it refers to the conformist state. On the other hand,



there are times when we feel rules to be restricting, confining, unjust and repressive. At such times, we want to break free of the rules, do things differently in obsolete manner, unforeseen, and even commit acts that may be immoral, aggressive, forbidden or just plain “bad.” This is called the negativistic or rebellious state. The tax reform from GST to SST 2.0 is one of the examples of what happen when the public choose to rebel.

#### 4. Research Methodology

This study used a qualitative design in the data collection. Semi structured face-to-face interview method was adapted because of the exploratory nature of the research question. It was also because of the interviews’ ability to identify and generate the range of relevant issues surrounded the new SST 2.0. The interviews were conducted to understand issues and problems faced by publics on the recent tax reform in Malaysia in a very informal manner. The informality of the interviews was intended to encourage participants to express their opinions freely without fear.

The sample for the study consists of 12 interviewees, nine were from middle income level (M40) while another three were from low income level (B40). The respondents were chosen due to their convenience and willingness in answering the interview questions. The interviews were conducted in the month of September 2018. The interview questions were prepared based from the information derived from the review of literatures. For ethical reason, an information sheet explaining the research work and the rights of the interviewee was handed out and explained. During the interviews, measures were taken to ensure the wordings of the questions and the manner of questioning did not bias the interviewees. The following table presents the profile of the interviewees selected for the qualitative interview. For ethical reason, the interviewees are referred to as case 1, 2...until 12 respectively.

**Table 1: Profile of the Respondents**

Interviewee	Gender	Education	Age	Job	Category
1	Female	Degree	48	Teacher and part-time baker	M40
2	Male	Diploma	37	Technician	M40
3	Male	SPM	41	Used-car dealer	M40
4	Female	Degree	36	Teacher	M40
5	Female	Master	44	Teacher	M40
6	Male	Degree	32	Diplomat Officer	M40
7	Male	SPM	75	Businessman	M40
8	Male	Degree	36	Teacher	M40
9	Female	Degree	38	Teacher	M40
10	Female	SPM	47	Housewife	B40
11	Female	SPM	48	Housewife	B40
12	Female	SPM	51	Housewife	B40

#### 5. Findings and Discussions

This section reports the findings from the interview sessions which involved 12 interviewees. Nine of them were from middle income level (M40) while another three interviewees were from lower income level (B40). The public had experienced two tax reforms within three years’ time from the GST implementation on 1<sup>st</sup> April 2015 to the new SST on 1<sup>st</sup> September 2018. Findings will discuss on the monitoring roles by the government agencies, the effect of goods’ price and tax awareness from the taxpayers.



### **5.1 Monitoring Roles of the Government Agencies or Tax Authority**

From the interview session conducted, seven out of the 12 respondents urged the government to monitor the businesses. Business shall not take advantage of SST 2.0 implementation. The reaction showed by Respondent 1 was:

*"...the people are angry, the government is taxing GST, SST...but the monitoring activities are weak...that is why people get angry.."*

Meanwhile, Respondents 2, 6 and 7 emphasised that:

*"What I heard is that...even when reading in Facebook, previously the price of the item is more expensive...because the GST tax is recurring..6% in every supply chain...for me, the government is not wrong by reintroducing the SST 2.0, but they have to make sure that the enforcement is good, ensure that the price of goods are monitored. Don't let the businesses taking advantage by simply increasing the prices of goods..."*

*"I heard that SST is good...because in previous GST, the price of goods were mark-up to 24% as there is a problem with enforcement...and end up, the consumers were burdened badly"*

While the rest of respondents, Respondents 10, 11 and 12 mentioned these respectively:

*"why is the government doing this to us...we are poor people...we just afford to buy the necessities but the prices are getting higher, don't the government enforced any monitoring activities?"*

*"I just bought some onions yesterday, why is the price is so expensive? Even onions is the basic necessities, it is unfair for us, the businesses simply rise up the prices of goods, so can you please tell the government to come down and monitor the prices of goods?"*

*"Instead of adding more goods to the SST exempted list, the government should also monitor the businesses..."*

From the findings, it is proved that monitoring activities are vital in ensuring the success of the consumption tax reform (James, 2015; Badinski & Bakija, 2014; McClellan, 2013; Guyton, Manoli & Payne 2018). Axcelasia Taxand Chairman, Veerinderjeet Singh regretted that previous consumption tax monitoring was lacking and many businesses took advantage of it by rising up prices. Among the misbehaviour done by the businesses was adding on the input tax to the costs of goods sold even they were not supposed to do so as it is claimable. Besides, the separated monitoring body that ruled the consumption tax, the Royal Malaysian Customs Department (RMCD,) was the executor but the monitoring came under the Domestic Trade and Consumer Affairs Ministry. Thus, the monitoring activities under the Anti Profiteering Act failed as a result to the dichotomy (Malay Mail 2018 'Success of SST Hinges on Enforcement).



## 5.2 The Effect on Price of the Goods

From the interview session conducted, 10 out of the 12 respondents were concerned that price fairness was affecting their acceptance towards consumption tax reform. Based on the interview conducted in this study, Respondent 1 was quoted as saying:

*"The price is increasing today. I bought box of cakes, and went up in price, a difference in RM600 compared to the month of May. It's bad, I do business because I'm looking for additional income but the cost goes up."*

In agreement to the rising in price of products, Respondent 2 mentioned that:

*"Now, the price of the item does not change. There are also the goods that go up..th.at oil prices are higher. During GST period, many prices of goods t rise due to 6% taxes, but now in SST, most of the goods should go down ... because the government says that most of goods are exempted from SST, but why do not prices go down? I bought Annum 500g milk for RM28.90, now RM31.90, I just bought a box...I don't think the milk is charged under SST...sometimes I have to change the cheaper milk for my child".*

At the same time, during the interview sessions, Respondents 4,6, 8 and 9 informed had similar answers regarding the price of goods being the same or have increased from the GST era.

*"...the price of goods seems same compared to GST before..even the GST is said have recurring charge effect...6% at every supply chain.."*

*"I did not keep the receipt very much..if you look at the expenses now, it does not matter much...same as before, previously, the GST tax appeared on the receipt when we buy the goods...so we know the taxable goods...but now, people are really looking at the price of cheap stuff, but the price of the goods embedded with SST so the consumers are not able to see what item is taxable...because the charge is hidden in the price good"*

*"There are so many differences in the prices of goods and services now, even the basic necessities were also getting expensive nowadays...how about those with lower-income earners? They must be burdened by this consumption tax"*

*"Yes, the prices of goods really rise up nowadays. Yesterday, I bought the foods for my cats, it's getting higher now...even the quotation from the contractor (I want to renovate my house) made me shocked...but the contractor told me that the prices of building materials are expensive now"*

In contrast, Interviewee 3 seemed to appreciate the new tax reform of SST 2.0. This situation could be due to his nature of business as second-hand car dealer. He claimed that the second-hand car dealer seems to gain benefit due to the price of the car is reducing as compared to during the GST tax system.



*“During GST, the second-hand car dealer will charge 6% to the customer when the transaction occurred either selling of car or refinance. However, with SST which is single supply chain, tax will on levy at the manufacturer stage not at the distributor, thus, lowering the price of the car”*

Most of the findings are in-lined with a number of concerns that the SST would apply in most transactions between related companies of the same corporate group. This would create significant costs for such groups, as there are considerable shared costs (The Star, 2018; ‘Transition to SST Lessons Learnt for Future Tax Reforms’). This is one of the cascading effects in SST (RMCD, 2013). Grinberg (2006) elaborated that some goods are double-taxed as businesses pay sales tax on goods they purchase as inputs and the inputs are taxed second time during sales of the final goods. Adli Amirullah, a research coordinator at the Institute for Democracy and Economic Affairs (IDEAS) warned that bringing back the SST may increase the price of goods because of double taxation in the tax regime (Sinar Harian, 2018).

The answers from the B40 respondents showed that they were really upset with the prices of goods and services after the consumption tax reform took place. Respondents 10, 11 and 12 expressed their exasperation:

*“It is so expensive...the prices of goods before and after the implementation of any consumption tax...I received aids from the Majlis Agama Islam Melaka (MAIM). Before this, they gave RM150 and now they increased to RM200. But still, it is not enough.*

*“Nowadays I only able to but fewer goods with RM50, luckily my kids received aids from Kumpulan Wang Amanah Pelajar Miskin (KWAMP) and Rancangan Makanan Tambahan (RMT), so I can manage their school utilities by using the funds. But, my kids also want to be like other children, they want to eat KFC, go to amusement parks, but I can’t fulfil their needs as it is costly...”*

*“We are the buyers, we only buy in small amount, the price of goods are really expensive, but why the government taxed us? The businesses able to claim the tax being paid to government, but, how about us?”*

The answers from the B40 respondents showed consumption taxes are burdening the households with lower income, as they applied the same tax rate for all (Galle, 2008; Poterba, 2008; Kim-Hwa & Qi, 2013; James, 2015; Dordevic, 2015). Besides, the regressive consumption tax will reduce the disposable income of lower and middle-income earners. The poor have to pay more as a percentage of their income than the rich do (Gruber, 2011; Narayanan, 2014; Alappatt & Junaid, 2014 & Dordevic, 2015).

### **5.3 Tax Awareness**

All interviewees categorised as lower income earners (B40) did not understand at all what the GST and new SST are, and they did not even have knowledge of these two tax reforms. They just noted that the price of goods consumed increase as reflected from the receipts that they received at the counter. However, with SST 2.0, they expected for betterment. Unfortunately, the price is still high and they even noticed that price of some of goods are



even increase during the new SST. While, for middle income level, the responds were as follows:

*“The price of goods are became more expensive now. For example, I bought bulk of boxes for my homemade cookies. The price increase to RM600 now as compared in the month of May 2018.”* (Interviewee 1).

Interviewee 2 also supported the same contention as Interviewee 1 where he claimed that the price of Anmm 500g milk for his baby has now increased from RM28.90 (GST) to RM31.90 (new SST) and this situation has forced him to substitute with the cheaper baby milk.

Interviewee 4 seemed unclear on the effect of the tax reform as she did not check receipt received every time she purchased any product. Thus, she was unable to decide on the changes in price of goods during SST. For Interviewee 5, although she has got the information about the tax reforms, she is still unclear on the mechanism and how it affects the price of the goods.

Lack of knowledge about the consumption tax implemented in Malaysia has led to shudders among the society (Suriana et al., 2015). It is because knowledge on taxation has proven to influence the compliance level (Ling, et al., 2016). It has also led to awareness on the tax collection being spent by the government (Moomal & Zakaria, 2014). Besides, by educating consumers with tax knowledge, it will enhance public acceptance (S. Hambali & Kamaludin, 2017).

## 6. Conclusion

It can be concluded that most of the respondents that participated in this study agreed that monitoring activities, price fairness and tax awareness affect their acceptance towards tax reform in Malaysia. Since Malaysia just underwent the consumption tax reform, there is limited empirical evidence on the issue of public acceptance in the tax system. The information on the current level of acceptance among the public particularly on the dimensions that require attention from the tax authorities may help in improving the tax system in Malaysia. This will therefore enable the tax administrative to undertake measures for a smooth and effective transition to SST 2.0. This includes enhancing the current support system and enforcement. Having this information will assist the tax authority to focus on possible ways to improve the fairness of taxation in Malaysia. In this regard, the approach taken would be problem solving-oriented with the intention to resolve the issue identified rather than to overhaul the whole consumption tax system.

Acceptability is undeniably important for the tax authorities to plan and develop the appropriate mechanisms to improve compliance. If the findings suggest that fairness perceptions significantly influence consumers' decisions to comply, the tax authorities may need to emphasise on ways to improve the tax instrument. It can be done by being transparent about how the tax money is spent, allocating fair distribution among consumers and treating the consumers in sensible manner. Reversal Theory stated that at one side, the public may accept and follow the indirect tax being implemented by the government. On the other hand, the public will rebel when they feel burdensome by the tax – the situation that happened with GST. The government should employ some strategies such as incorporating tax education in high school curriculum, and having consistent public campaigns through



mass media and on-going seminars for the consumers may be helpful to encourage them to accept it. In addition, the information on consumers' level of knowledge may benefit the tax authorities to develop their tax education and tax simplification programme.

In short, the findings of the study should assist policy-makers, particularly tax authorities, in reviewing and modifying current tax systems. It is necessary to enhance consumers' acceptability of consumption tax reform in Malaysia for future improvement. Future studies may look at the efficiency of new tax regime SST 2.0 that can be discussed from the administrative part of RMCD or the compliance part from the taxpayers.

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## **The Relationship between Background Music and Customers' Emotion towards Duration of Stay in Restaurants**

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### **Abstract**

Food service in Malaysia has grown positively and to a certain extent is being labelled as 'sophisticated'. The atmosphere in restaurants such as the colours, scents, temperature and music have become some of the essential elements that influence customers' behaviour. Previous studies have shown that music genre, rhythm and tempo were able to arouse the emotion of customers, thus affecting the patrons' consumption and duration of stay. Therefore, this study aims at reporting the empirical investigation of background music, emotions and duration of customers' stay in cafés and restaurants. The findings of this study revealed the relationship of the background music managed to arouse the emotion of patrons which led to lengthening the duration of customers' stay and increasing their consumption. The positive response among the customers indicated that the use of music in restaurants plays an integral part. As such, it is important for restaurateurs to choose suitable music to create pleasant atmosphere as it influences customers' emotion.

**Keywords:** Background Music, Emotion, Duration of Stay

### **1. Introduction**

Types of music genre, rythm and tempo in restaurant play integral part in influencing consumers' behaviour. In food service establishment, music can be assessed through four characteristics which are the tempo of the music (Milliman, 1986; Caldwell & Hibbert, 2002), type of music (Magnini & Thelen, 2008; North, Shilcock & Hargreaves, 2003), difficulty of the



music (North & Hargreaves, 1996) and volume of the music (Guéguen, Hélène & Jacob, 2004). Pleasant and good music could arouse the positive behaviour of the customers to lengthen the duration of stay and spending, thus generating profit for the restaurateurs. This has been supported by Radocy and Boyle (1997) who suggested that appropriate music that is played in a restaurant or retail setting will make people tend to spend their money and time. As mentioned by Roger (2006), when pleasure is increased, it can affect the behaviour of the customer. Morrison (2001) noted that customers' emotion is a factor to arouse the positive impact on time and money spending. In addition, customers also lengthen the duration of stay in restaurants and increase their expenses as well (Milliman, 1986; Sullivan, 2002; Akrim, 2013). On the same note, there are an abundance of studies on consumer acceptance regarding music (Milliman, 1986; Caldwell & Hibbert, 1999; North, Shilcock & Hargreaves, 2003; Akrim, 2013; Soh, Jayaraman, Choo & Kiumarsi, 2015). However, there are few studies that focus on music and the duration of stay in café restaurants specifically in Malaysia.

## **2. Literature Review**

### **2.1 Background Music**

Music is an important factor to be considered in business. Most customers perceive that when the fast tempos of music are played, the store will become cool and modern and when the slow tempos of music are played, the store will become tiring and dull instead of relaxed and calm. Research findings show that music has different styles and the suitable volume can influence the perception of the customers. People's behaviour can be influenced by background music as it distinctly affects the time that they are prepared to wait (Areni & Kim, 1993). Moods and behaviours can be altered by music (Donovan, Rossiter, Marcolyn and Nesdale, 1982) as certain, favourite music gives a positive effect on consumers' mood. Most studies have examined that emotional (Michael, 2002) and behavioural (Cameron, Baker, Peterson & Braunsberger, 2003) responses rather than cognitive ones (Oakes, 2003). Music has been manipulated in its structural characteristics such as time (rhythm, tempo, phrasing), the degree of highness or lowness of a tone which is pitch (melody, mode, harmony) and texture (timbre, orchestration and volume), and it is effective elements such as valence (liking), familiarity and types of the music (Jain and Bagdare, 2011). To improve the efficiency and effectiveness of retail and service operations, background music can be obtained from the concept of atmospherics which is an area of environmental psychology (Yalch, 1990). Schmitt (1999) showed how the sensory experiences of shoppers can be created and enhanced by music that is the valuable primary element of atmospherics.

### **2.2 Emotion of Customer**

Music has become an important variable to create appealing store experience and it can connect straight to the customers (Burghelea, Plaias & Murad, 2015). When music is played, the customers will feel the environment so much better and the emotional state while waiting will have a better evaluation. Hul, Dube and Chebat (1997) focused on types of music that people like to listen to or that have produced positive emotion and the types of music that people dislike and uncomfortable listening to. Alpert and Alpert (1989) stated that happy music background will change the mood of the customers to happy mood and contrasting situation occurs if sad music is played. To reduce the counter-productive psychological condition such as frustration, anxiety, depression and negative mood, background music can be applied to enhance the positive condition of the shopping experience (Herrington & Capella, 1994). Bruner (1990) also suggested that other researchers should do more studies involving music and marketing aspects since music has been long considered as effective and efficient for activating the moods and nonverbal communication and it can also be a powerful emotion stimulus towards customer behaviours.



### 2.3 Duration of Stay

Duration of stay of the customers is important in retail because it will increase the spending of the customers (Garlin & Owen, 2006). Yalch and Spangenberg (1990) found that although familiarity is related to the increase in apparent duration of stay, there is a decrease in definite duration which proposes that creating generalisation about how music influence the customer can be dangerous. The duration of stay of the customers and the spending of the customers will be influenced by music preferences in the store. Oakes (2003) discovered that waiting queue for student perceived time waiting can be shorter with absence of music, and with slow music the duration of student perceived time waiting will exceed the perceived duration. Bailey and Areni (2006) suggested that the number of songs which can lead to different tempo will affect the perceived duration. Milliman (1982) explained that the movement of the customers become slower when slow music is played which takes 128 seconds. On the other hands, fast music will take 109 seconds for the movement. Interestingly, because of the longer time to spend in the store, then more money can be spent under a slow music condition. The volume of the music also affects shoppers' behaviours, in particular, time spent in store and perceived time spent in store. Smith and Curnow (1966) found that supermarket shoppers spend significantly less time in store when the music is loud.

### 2.4 The Relationship between Background Music, Emotion and Duration of Stay

Musical preferences of target consumers must be matched because it leads to positive marketing outcomes such as satisfaction, delight, browsing and spending time (Hawkins & Mothersbaugh, 2010). A study by Milliman (1982) discovered that music tends to change one's perception of spending time in a store. Meanwhile, emotion is intense feelings directed at someone or something. Moods are less intense feelings than emotions and often (though not constantly) arise without a specific event acting as stimulus. Most experts believe that emotions are more fleeting than moods. Emotions are usually accompanied by distinct facial expressions and are action-oriented in nature, while moods are cognitive in nature (Robbins & Judge, 2015). Mood is a primary mechanism for altering information-processing priorities and for shifting modes of information processing. In other words, mood is to modulate or bias cognition (Davidson, 1998). The relationship between mood and reaction to situational factors such as emotion is natural (Soh et al., 2015). To determine factors in consumers' approach-avoidance behaviours, the interaction between pleasure and arousal aspects are emphasised (Donovan et al., 1982). Approach behaviours are known as the wish to enter and explore and to be satisfied in the environment, while avoidance behaviours are referred to as the want to leave the environment. In order to create a good retail environment, an appropriate degree of arousal should be in consideration. According to Donovan (1982) and Sweeney and Wyber (2002), pleasure is a determinant of approach-avoidance consumer behaviours and arousal interacts with pleasure as if arousal increases approach behaviours in pleasant environments. As for dominance, it shows significant influence on behaviour. Baker and Cameron (1996) claimed that arousal is positively related to willingness to buy. Hawkins and Mothersbaugh (2010) support this statement by claiming music creates moderate levels of arousal that yields positive retail outcomes. The influence of the music is an effective atmospheric signal on purchase behaviour outcomes such as sales in ringgit. In addition, research showed that more money is spent in wine store when classical music is played (Areni and Kim, 1993). Due to pleasure and approach behaviour induced by typical environment, soft music is able to increase the expenditure (Sullivan, 2002). Eventually, it is proven that best use of music in atmospheric setting should be applied so that it can help to increase the total sales. Music can be a positive hearing signal to enhance the emotion and behaviour of the customer. Furthermore, the willingness to buy has positive relation with pleasure and arousal (Baker & Cameron, 1996). Gorn (1982) stated that customers will transmit the feeling on hot to evaluate



their pleasure with the store or its products. For the good mood of shopper, they will evaluate their shopping experience more positively than when they are in bad mood (Swinyard, 1993). The increase of rate of the activity can be related with higher levels of arousal (Smith & Curnow, 1966). This arousal can increase the purchase intentions and time spent, while the higher spending of money can be related to greater level of pleasure (Sherman, Mathur & Smith, 1997). Donovan et al. (1982) suggested that both time spent and willingness to return can be influenced by the pleasure and arousal. There are two contrasting behaviours of emotional responses which are approach and avoidance. Approach behaviour includes staying, exploring and affiliating with others in the environment (Booms & Bitner, 1980), while avoidance behaviour involves escaping from the environment and ignoring to communicate with others (Donovan et al., 1982).

### 3. Methodology

This study was carried out by using a quantitative approach through cross sectional study applied with self-reported and self-administered questionnaire. The use of quantitative research in this study is acceptable as the aim of the study was to gain wider information on the influence of background music towards duration of stay in the cafe restaurants, and the influence of background music towards emotions of the customers. This study used correlation analysis to analyse the relationship between variables. The survey was conducted at selected cafe-restaurants located in Sunway Carnival at Seberang Jaya, Penang. A total of 240 respondents who were the customers of the cafes were asked to help answer the questionnaire. A five (5) point Likert scale adapted from Kim (2006) was used and there were 6 items used in section A to measure the background of music. In section B there were 12 items that were adapted from Kim (2006) and Soh et al. (2015). Meanwhile, in section C there were 3 items adapted from Akirin (2013). The data were coded and keyed in the Statistical Package for the Social science (SPSS) version 20 for analysis.

## 4. Results and Discussions

### 4.1 Demographic Profiles

**Table 1: Demographic Profile**

	Classification	Frequency n=240	Percentage (%)
<b>Gender</b>	Male	123	51.3
	Female	116	48.3
<b>Age</b>	<18	40	16.7
	19-25	98	40.8
	26-30	72	30.0
	>30	30	12.5
<b>Ethnic origin or race</b>	Malay	155	64.6
	Chinese	43	17.9
	Indian	34	14.9
	Others	8	3.3
<b>Employment status</b>	Student	73	30.4
	Employed	138	57.5
	Not employed	19	7.9
	Others	10	4.2



<b>Type of music tempo</b>	Slow	131	54.6
	Fast	109	45.4

Most of the respondents (51.3%; n=123) were males and 48.3% (N=116) of them were female. The respondents' age ranged from below 18 to more than 30 years old as shown in table 1. Most of the respondents aged from 19 to 25 years old with 40.8% (N=98). Respondents who were more than 30 years old had the lowest percentage which was 12.5% (N=30). Most of the respondents were Malays with 64.6% (N=155). The respondents with other ethnic origin or race had the lowest percentage that was 3.3% (N=8). Meanwhile, the lowest percentage of employment status in this study was others which was 4.2% (N=10) and the highest percentage was customer that has been employed that was 57.5% (N=138). The result also showed that, most of respondents preferred slow tempo music in the café restaurants with 54.6% (N=131) and 45.4% (N=109) preferred for the fast tempo of song. Based on the demographic result, it can be said that working Malay women tend to patron the cafes or restaurants in Seberang Jaya, especially those aged between 19-25 years old and most of them prefer to hear slow songs instead of fast songs. However, this research was conducted during lunch time and, therefore, it might influence the selection of music. The results should not be generalised to other factors because the difference percentage between male and female was relatively small.

## 4.2 Correlation

**Table 2: Strength of correlation**

Variable	Background music	Emotion	Duration of Stay
<b>Background music</b>	-	.596**	.137*
<b>Emotion</b>	.596**	-	.185**
<b>Duration of Stay</b>	.137*	.185**	-

Note: \*p<0.05, \*\*p<0.01

The results indicated that there is large strength of correlation coefficient between background music and emotion of the customers (p value = <0.01),  $r = .596$ . This shows that background music plays an important part in influencing the emotion of customers. This has been supported by Baker and Cameron (1996), who claimed music is useful for hearing signal that can enhance the emotion and behaviour of the customers. Meanwhile, background music and duration of stay have a small strength of correlation coefficient (p value = p<0.05),  $r = .137$ . Even though the strength is relatively low, it still shows that music can influence the customers' duration of stay. Down (2009) noted that music does influence customer duration of stay in restaurants. This situation occurs probably because of the consumers dislike the tempo of music while they are in the café restaurants. Eventually, the effect of the emotion of customer towards the duration of stay also has small strength of correlation coefficient (p value = p<0.01),  $r = .185$ . Hawkins and Mothersbaugh (2010) stated that music preference of target consumers must be matched to the musical preference because it can lead to positive marketing outcomes such as satisfaction and delight, browsing and spending time.



### 4.3 Mediating Effect of Emotion of Customer towards Relationship between Background Music and Duration of Stay

**Table 3: Result from regression analysis for mediating factor**

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta ( $\beta$ )		
(Constant)	3.608	.772		4.676	.000
Direct	.022	.041	.042	.528	.598
Indirect	.041	.020	.160	2.010	.046

Dependent variable: Duration of stay

Table 4.3 shows the result of the regression analysis. The  $R^2$  after adding the mediating factor which is the consumers' emotion is 0.598. This shows that only 59.8% of the variation in duration of stay can be explained by background music and customers' emotion. The direct effect is between the independent variables and mediating variable or between mediating variable and dependent variable. Meanwhile, the mediational effect in which independent variable leads to dependent variable through mediating variable is called indirect effect. Baron and Kenny (1986) proposed a four-step approach in which several regression analyses are conducted and significance of the coefficient is examined at each step. The first step is simple regression analysis between background music and duration of stay. The result showed that there is slight relationship. The second step is simple regression analysis between background music and emotion. The result showed that there is a moderate relationship. The third step is simple regression analysis between emotion and duration of stay. The result showed that there is a slight relationship. The last step is a multiple regression analysis between background music, emotion and duration of stay. Based on table above, consumer emotion mediated the relationship between background of music and duration of stay, indirect effect  $\beta = 0.041$  and  $p$  value = 0.046. The direct effect of background music and duration of stay was  $\beta = 0.022$  and  $p$  value = 0.598 which the effect is after controlling for the mediation effect. Hence, it was found that emotion mediates the relationship between background music and duration of stay. As mentioned by Burghilea, Plaias and Murad (2015), emotion can influence the duration of the customers by playing the suitable music. This is supported by Van der Zwaag, Westerink and Van den Broek (2011) who indicated that music is supposed to influence the happiness, surprise, pleasantness, anger and fear to the listeners. Happy music produces more happiness and less sadness when compared to sad music. Through this finding, it can be concluded that background music is an essential element to attract customers to dine longer in a restaurant. Therefore, entrepreneurs should choose and play suitable songs that can maintain the customers' emotion. Due to pleasure and approach behaviour induced by typical environment, music is able to increase the expenditure (Sullivan, 2002). Eventually, it is proven that best use of music in atmospheric setting should be applied so that it can help to increase the total sales. Therefore, it is evident that the relationship of music and customers' emotion do play a role in the duration of stay in restaurants. Music selections should be one of the factors for restaurant operators to consider when dealing with customers.



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## **Organizational Justice, Organizational Reputation and Self-esteem in Improving Employability in Malaysia**

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### **Abstract**

This paper reviews the recent perspectives of the employability background in Malaysia, which lately has been gaining strong attention from the academicians. This paper begins by highlighting the Malaysian government who has undertaken various initiatives to improve Malaysia employment rate within the six months after graduation and yet, the rate has remained constant since the last five years. The situation even deteriorates due to the increased attitudes of the graduates who are choosy and refused to apply for a job after graduation. The traditional approaches are likely drowning in lifting the employment rate to the higher standard. Thus, this study highlights the employer's role as a new approach in dealing with the issue which has been discovered from the job seekers' perspectives. This study promotes the organizational justice, organizational reputation and self-esteem as the determinant factors to face a new trend amongst the graduate labours. The concept is an important characteristic to the outsiders such as the customers, stakeholders, co-workers, members of general public and others. As graduate labour is one of the outsiders to the organization, the concept anticipates to influence them in applying job with an organization, simultaneously improving the number of graduate's employability. To conclude, various parties have to cooperate with each other including the Malaysian government, higher education and employers for aspiration to improve the employment rate in the year 2020 as stipulated in RMK-11.

**Keywords:** Job Seeker; Organizational Justice; Organizational Reputation; Self-Esteem; Employment Rate.



## 1. Introduction

Human capital development is one of the government's important investments in the country which can be noticed from vast allocations of annual budget. According to the records, the cumulative amount budgeted to develop human capital in the Ninth Malaysia Plan is totaled to RM16 billion and the number increased to RM18 billion in the Tenth Malaysia Plan. Most of the allocations was for the development of university's facilities including the new lecturer's hall, refurbishment of the existing laboratory, new equipment for research purposes, hostels and others. The endeavors who provide conducive working environments and also supports learning activities are believed to be a contribution to the positive development of Malaysian undergraduates.

Other than that, the budget was also allocated for the development of the educational system to produce undergraduates with a world class standard. For example, National Graduate Employability (GE) Blueprint (2012–2017) was developed to serve as a guide to produce world class undergraduate (Ministry of Higher Education Malaysia, 2012). A budget of RM200 million was allocated to form a Graduate Employability Taskforce (Ministry of Higher Education Malaysia, 2012) to help improve graduate's competency. Furthermore, the quality of the educational system has been strengthened through the establishment of the Malaysian Qualifications Agency (MQA) to implement the Malaysian Qualifications Framework (MQF) and develop an integrated quality assurance system. The development of the system mainly to monitor and regulate courses offered at Malaysian universities in order to achieve world class graduates. Obviously, the Malaysian government is willing to invest in the educational development to enhance the graduate's competency as it believes that the progress of graduate's competency would increase the national strength.

To further enhance the level of graduate's competency, the Malaysia Institutions of Higher Learning (ILH) is constantly working to improve the academic programs. Among the programs that have been and are being implemented is the introduction of soft skills module starting from the academic year of 2007/2008 which aims to enhance students' communication skills and level of language, especially English. Moreover, the ILH also introduced the Entrepreneurship Module to equip students with entrepreneurial skills relevant to the market so that the prospective graduates can be more independent in terms of their profession. In addition, students in Institutions of Higher Learning (ILH) were obliged to live the industrial practice for six months for critical courses and other courses for three months to give better exposure to the students regarding the actual work of the neighborhood and help them to improve better.

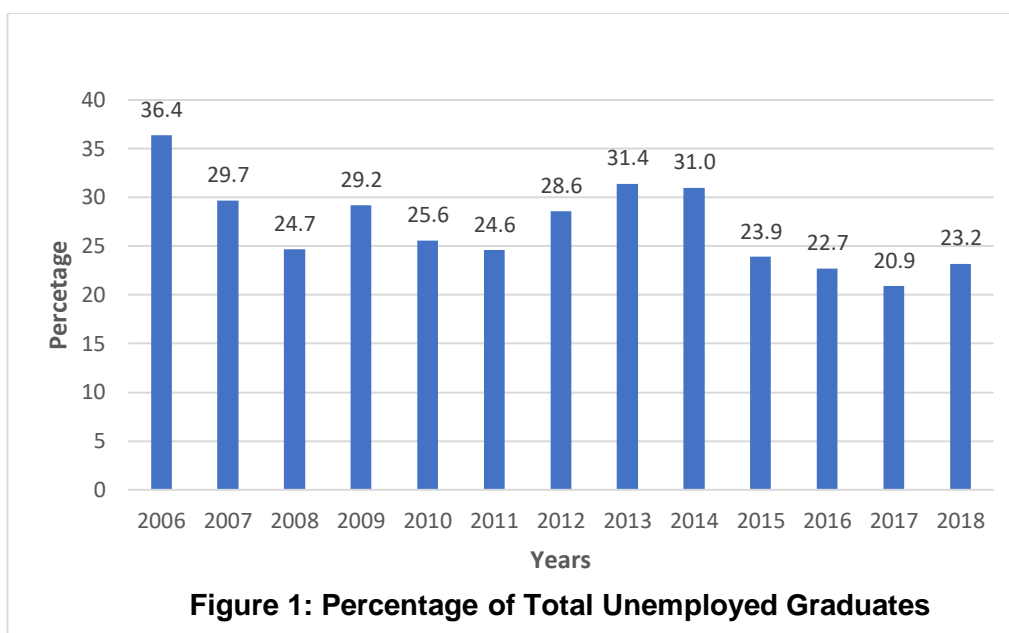
The government also never overlook to improve the quality of the teaching staff by increasing the number of academic staffs with Ph.D. The efforts have been intensified to increase the number of Ph.D. qualified amongst academic staff since 2010. The percentage of academic staff holding a Ph.D. in all public universities in 2009 was 35.9%. By the end of the plan period (2023), the Ph.D. qualified academic staff at the universities are targeted to be of 75%. To achieve this target, the educational programs were introduced to increase the number of Ph.D. holders from 18,000 in 2015 to 60,000 in the year 2023. A total of 2.26 billion was allocated in the Eleventh Malaysia Plan to provide scholarships to 16,800 academic staff pursuing studies at the Ph.D. level.

The reality is, Malaysia Institutions of Higher Learning (ILH) has been rapidly growing, and increasingly enhancing since a few decades ago (Malaysia Education Development Plan, 2013). In the period of ten years, increasingly striking student enrolments, increasing global recognition outshined in the various aspects of publication, research outcome, patents, and the qualities of the institution, as well as the impulsive growth in the number of the international



students. These achievements are the results from the efforts and innovation power of academic communities in Malaysia, a contribution from the private sector and large government's investment.

Ironically, the rate of employment among fresh graduates has not increased considerably since 2006 (Jayasingam, Fujiwara, & Thurasamy, 2016). The employment rate recorded annually in the last 10 years trapped at 65% to 75% as can be seen in **Figure 1**, which means the government's target of 80% employment after six months graduated is not yet achieved. Thus, it is timely to venture into the new perspective to achieve the country's inspiration. The present study emphasizes on the roles of employer in bridging the gap is something that is rarely discussed in Malaysian's perspective particularly related to the emerging of competent undergraduates. The next section will discuss the employer's roles in the new era of competent undergraduates.



## 2. Issues and Challenges

Sufficient human capital, as an employer, is indispensable to manage a company efficiently and effectively. Bearing this in mind, difficulty in filling job vacancies must be addressed promptly because the issue is capable to threaten the amount of workforce in an organization. Based on a recent study by Talent Corporation Malaysia jointly conducted with Institute of Labour Market Information and Analysis (2016), Malaysian employers were having difficulty in filling job vacancies in certain occupational field such as Electrical & Electronics engineering, Accountancy, Financial services, Telecommunication & Multimedia, Oil & Gas and Global Business Services. The fields are termed the Critical Occupational Lists (COL). Malaysian employers reiterate that they were struggling in filling job vacancy with people of the appropriate work skills, soft skills and interpersonal skills for COL fields. Consistent with the finding by Jobstreet based on a job market survey, the biggest recruitment agency in Malaysia articulated that Malaysian employers were having difficulty filling job vacancy for certain occupations (Jobstreet, 2013). Thus, the root cause of the difficulty must be scrutinized to propose precise and practical solutions to reduce difficulty in filling job vacancies.



According to ManpowerGroup (2015), lack of available applicants is one of the reasons for difficulty in filling the job vacancy. Availability of applicants depends on the demand and supply of graduate labour in the labour market. Graduate labour demands are higher than the supply because of rapid economic development in the country that correlates to the lack of available applicants. For example, Japan's economic development expands rapidly which contributed to the demands of the graduate labour is higher than the supply. The occasion effected the country's capability to fulfill the number of graduate labour required (Alec, 2017). According to ManpowerGroup (2013), 85 percent of Japanese employers admitted having difficulty in filling job vacancies in the country for the reason of lack of available applicants. The percentage indicates that Japan is the most difficult country to recruit graduate labours in the world.

The second factor for difficulty of filling job vacancy is the quality of graduate labour. A number of studies revealed that Malaysian employers emphasize on the graduate labor's soft skills quality in hiring employee (eg., Daud, Abidin, Mazuin Sapuan, & Rajadurai, 2011 and Jobstreet, 2013). The reason is based on Stanford Research Institute and Carnegie Melon Foundation surveys involving Fortune 500 CEOs revealed that 75% of getting and maintaining a job successfully is supported by individual's generic or soft skills, while only 25% accounts for hard skills or technical knowledge (Malhi, 2009). "Like icing on a cake, these soft skills are now expected to complement current undergraduate education which can then be applied across a variety of system domains such as work productivity and community life," (Singh, Thambusamy, Ramly, Abdullah, & Mahmud, 2013). These generic skills, once considered value-added, are no longer an addendum to a graduate's transcript but have become integral in recruiting undergraduate (Singh, Thambusamy, & Ramly, 2014). This means, although the number of graduate labours at the labour market is more than what the industry required but without the standard quality, it also contributes to the difficulty in filling job vacancy.

Most recently, a study on this issue inclined to relate this with the third factor which is applicants' choosiness attitude. A survey by Jobstreet (2013) delineates more than 30 percent of Malaysian employers believe undergraduates are being too choosy in selecting the potential companies. Meanwhile, an empirical study by Jayasingam, Fujiwara, & Thurasamy (2016) had confirmed that Malaysian undergraduates have this type of choosiness attitude. The Ministry of Higher Education (MOHE) Malaysia advises that undergraduates should not be choosy about employment (Kosmo, 2012). The Ministry realised that this attitude among Malaysian undergraduates was spreading. Based on the latest study, 60 percent Malaysian undergraduates are with choosiness attitude (Jobstreet, 2016). The worst part was that they are even willing to be jobless rather than taking a job that are not attractive (Nursyamimi, 2015). The influence of graduates' level of choosiness was also reflected in a survey conducted by ManpowerGroup, (2013) among employers within the Asia Pacific region. Clearly, it is a reality in Malaysia and Asia Pacific Region that nowadays undergraduates are choosy in selecting their organization.

Since choosiness attitude is an issue amongst Malaysian graduates in recent times and related to difficulty in filling job vacancy (ManpowerGroup, 2015), Jayasingam, Fujiwara, & Thurasamy (2016) proposed to investigate choosiness attitude based on organizational characteristics such as compensation and benefit, work place and office environment, company brand and reputation, company size, culture, history, contract condition, job position, responsibility in the organization and more. The researchers believed that the organizational characteristics are capable to attract choosy applicants to apply and accept job offers and subsequently improves employability rate. Studies on organizational characteristic effected job seeker to apply job with organization had long been executed that is known as job seeker's attraction. For example, organizational characteristics such as corporate social responsibility (Greening & Turban, 2000), flexible working hour (Thompson, Payne, & Taylor, 2015), smoke



free policy (Park et al., 2010), organizational culture (Catanzaro, Moore, & Marshall, 2010), organizational reputation (Cable & Turban, 2003; Turban & Cable, 2003) and others are proven capable to attract applicants to apply job with an organization.

### **3. Roles of Organizational Reputation, Organizational Justice and Self-Esteem to Job Seeker Attraction**

As for Malaysian undergraduates, most of them rates company's reputation as the main criteria to make decision (Mynewshub, 2016). Fundamentally, undergraduates should be concerned about a company's reputation because it signifies the "bonding signals" that communicate an organization's competitive position as an employer under the conditions of imperfect information (Cable & Turban, 2001). This means, undergraduates with limited knowledge of an organization will make decision to apply and accept job offer based on the reputation of a company because it spreads positive value to them. The empirical research has confirmed that employers' reputations are a distinct, important component of potential employees' employer knowledge (Cable & Turban, 2003; Turban & Cable, 2003). For example, friends' evaluations of firms affect potential employees because they "validate" organizations as suitable employers, and Cable & Turban (2001) suggested that when peers evaluate an organization positively, their opinions serve a legitimizing function. Therefore, the organization's reputation does contribute significant impact to a job seeker's attraction.

Fundamentally organizational justice is related to organizational reputation (Skarlicki, O'Reilly, & Kulik, 2015) and the concept is important to both employees and potential employees (Skarlicki & Kulik, 2005). Recent studies have shown that people from outside organization emphasized on organizational justice. For example, the way a hotel management treats its staff significantly predicts guests' respond to the organization (Zoghbi-Manrique-de-Lara, Aguiar-Quintana, & Suárez-Acosta, 2013). Furthermore, when employees treat one another in an uncivil manner, customers make negative inferences about the entire company and its other employees (Porath, MacInnis, & Folkes, 2010). Other studies identified biases in organization was a significant impact to outsiders' responses (Blader, Wiesenfeld, Fortin, & Wheeler-Smith, 2013). The study also examined how social media can engage outsiders to respond to organizational wrongdoing (Kulik, Pepper, Shapiro, & Cregan, 2012). Finally, researchers discovered an organizational justice gossip that spread beyond the company fence to customers, significantly effects the outsiders (Beersma & Van Kleef, 2012). Justice is a universal concept which seems like an important characteristic even to the outsiders in the recent studies. Such as an important characteristic to outsiders, the concept anticipated to influence potential applicants (outsiders) in selecting a place of work.

In anticipating the important of organizational reputation and organizational justice to present study, other form of relationship must be taken into consideration. Accordingly, this present study looks at mediating impacts of the organizational reputation to the relationship between organizational justice and job seeker attraction. Previous studies showed organizational reputation as mediator of the relationship between organizational characteristics such as organizational pro-environment (Behrend, Baker, & Thompson, 2009), corporate social performance (Jones, Willness, & Madey, 2014) and media richness (Baum & Kabst, 2014) to the job seeker's attraction. According to Lievens & Slaughter (2016), it is an excellent work to include mediator to the direct relationship. Present study finds that conceptually organizational justice relates to organizational reputation (Skarlicki et al., 2015), while reputation have strong influence to job seeker's attraction (Cable & Turban, 2001, 2003; Turban & Cable, 2003). In other words, the organizational justice related to organizational reputation, in turn influence job seeker's attraction. Thus, present study anticipates that the organizational reputation mediated the relationship between organizational justice and job seeker's attraction (Edwards & Lambert, 2007; Mackinnon, Krull, & Lockwood, 2000; Shrout & Bolger, 2002).



Finally, the present study seeks to understand how the self-esteem influences the relationship between organizational reputation and job seeker's attraction. Turban & Keon (1993) found that potential applicant with low self-esteem were more attracted to positive identity organization. Cable & Turban (2001) acknowledged the findings and translated it via a proposition. The proposition articulates the relationship between organization reputation and job seeker's attraction is moderated by self-esteem. The reality is Turban & Keon (1993) did not study reputation (perceptions) per se because they manipulated elementalistic organizational reputation characteristics such as reward structure, management centralization, organizational size, and geographical dispersion (Lievens & Slaughter, 2016). Explicitly, the proposition was never been tested using a validated measurement but rather using manipulative factors were used to generate the proposition. This means, the self-esteem is a potential concept in improving the impact of organizational reputation and job seeker's attraction but not yet empirically tested.

#### 4. Study Prospect in Malaysia

A study on employment rate is frequently on the rise to blame the government and higher institutions for failure to achieve Malaysian employment rate even though a recent study found that the claim is not relevant anymore. Exploring the other factors are excellent solution for prolong issues like improving the employment rate. Unfortunately, not many studies in Malaysia are interested to explore in the new perspective and come out with the fresh idea and propose to the government or other parties to solve this issue. The reason is a study on the employment rate is only fixed at the government role and higher institution. Therefore, this study is a way to disseminate an information that a study on employment rate has to explore beyond the government and higher institution, to investigate the role of employers through the job seeker's perspective.

Numbers of literatures emphasizing on the role of employer from the job seeker's perspective are published every year in and outside of Malaysia. Table 1 provides some example of the latest literatures from outside of Malaysia that are related to roles of employer from the job seeker's perspective. Malaysia has different cultures, values and ways of life which has to be explored locally, so that it does not only depend on offshore literature in solving the local issues. Moreover, being different from others means that Malaysian's needs and preferences are also different that it requires a study to be conducted at a local perspective.

**Table 1: Studies on Role of Employers from the Job Seeker Perspective**

No.	Researchers	Topics	Organizational Characteristics
1.	Bustaman & Tambi (2018)	Organizational Justice from the Perspective of Potential Applicants	Organizational Justice
2.	Landay & DeArmond (2019)	Applicant gender and recruiter and organizational characteristics	Organizational Reputation and Recruiter competence
3.	Harrison & Stone (2018)	Effects of organizational values and employee contact on e-recruiting	Organizational Value and Employee contact
4.	Chaudhary (2018)	Can green human resource management attract young talent	Green Human Resource Practice



Locally, research in the subject matter has to be more intensified in order to solve the prolong issues and to achieve one of the key pillars in the RMK-11. Indeed, the Malaysian government realizes the issues has been outstanding for so long and set a target in RMK-11 to eradicate it once and for all. However, lack of new ideas from the executors and academicians resulted in a similar initiatives and activities which has been undertaken for the past three years. Consequently, there has been no positive significant change on employment rate within the period. Therefore, this paper urge academicians to venture into the subject and propose some ideas to the Malaysian government with the hope that there is an improvement to the employment rate.

## 5. Conclusion

In a nutshell, various parties have to cooperate with each other including the Malaysian government, higher education and employer for aspiration to improve the employment rate in year 2020 as stipulated in RMK-11. The endeavors have to simultaneously undertake the situation to ensure optimum impact from the initiatives and activities. Definitely, the Malaysian government has to be a coordinator in maneuvering the activities and initiatives especially involving the employers and job seekers. Finally, with the excellent coordination and cooperation from various parties, through holistic approach, the improvement of employment rate will be achieved.

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