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FOREWORD BY DEPUTY RECTOR OF RESEARCH, INDUSTRIAL LINKAGES & ALUMNI



Since 2018, the INSIGHT JOURNAL (IJ) from Universiti Teknologi MARA Cawangan Johor has come up with several biennial publications. Volume 1 and 2 debuted in 2018, followed by Volume 3 this year as well as Volume 4 with 19 published papers due to the great response from authors both in and out of UiTM. Through Insight Journal, lecturers have the ability to publish their research articles and opportunity to share their academic findings. Insight Journal is indexed in MyJurnal MCC and is now an international refereed journal with many international reviewers from prestigious universities appointed as its editorial review board members.

This volume 5 as well as volume 6 (which will be published in 2020) are special issues for the 6th International Accounting and Business Conference (IABC) 2019 held at Indonesia Banking School, Jakarta. The conference was jointly organized by the Universiti Teknologi MARA Cawangan Johor and the Indonesia Banking School Jakarta. Hence, the volumes focus mainly on the accounting and business research papers compiled from this conference, which was considered a huge success as over 66 full papers were presented.

Lastly, I would like to thank the Rector of UiTM Johor, Associate Professor Dr. Ahmad Naqiyuddin Bakar for his distinctive support, IJ Managing Editor for this issue Dr. Noriah Ismail, IJ Assistant Managing Editor, Fazdillah Md Kassim well as all the reviewers and editors who have contributed in the publication of this special issue.

Thank you.

ASSOCIATE PROF. DR. SAUNAH ZAINON

Deputy Rector of Research, Industrial Linkages & Alumni

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Assessment of Halal Governance Issues in Malaysia

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Abstract

This paper aims to assess the nature of Halal governance and the relevant issues revolving around it. The specific objectives are to provide an overview of Halal certification process within the framework of value chain and to highlight issues on the Halal governance scheme. Qualitative approach was adopted utilizing semi-structured interviews to understand in detail the stakeholders' perception and experiences about governance framework on Halal certification. Findings revealed that the current issues are pertaining to Political and Institutional Governance for Halal Certification; Regulatory and Operational Efficiency for Halal Related Agencies; and, Functional Ambiguity of Halal-Related Agencies. The study contributes significantly in the body of knowledge in terms of understanding and developing Halal governance ecosystem as it unveils the stakeholder's perspective in area that has been predominantly confined within academic experts' point of view only.

Keywords: Halal Governance, Toyib, Governance, Trading, Muslim Consumers.

1. Introduction

Globally, there are almost 2 billion of Muslims from the 7.6 billion people in the world. Due to religious reasons, this enormous market of Muslims consciously seeks trusted, Halal certified sources for their food, cosmetics, home care, pharmaceuticals, daily products and *Shari'ah* complied products to invest in. According to statistics, the global Halal market value that is recorded at approximately 1.4 trillion USD in 2017 is expected to reach 2.6 trillion USD in 2023 (GBHIF, 2019). In Malaysia, where Halal industry coexists together

with conventional markets, an important criterion that differentiates the former from the latter is its adherence with the Islamic rules or its Shari'ah compliance. In the current framework and practice of Halal certification, many issues have emerged regarding the adherence of the existing conventional industry practices with Shari'ah or Islamic law. This does not augur well with establishment and development of Malaysia as a global Halal hub. Hence, the study was conducted to provide an overview of Halal certification process within the framework of value chain; and to highlight issues on the Halal governance scheme.

2. Literature Review

The basic principles of Halal certification are Halal (permissible) and Thoyyibban (wholesome) taken from Al-Quran, verse 168 Surah Al-Baqarah. Muslims' consumption behaviour is governed by the Quranic philosophy of what is permissible (Halal) and what is not permissible (Haram) for a believer (Berry, 2000; Eliasi and Dwyer, 2002). These include adultery, gambling, liquor, pork, interest on money, blood of animals and the meat of animal sacrificed in the name of other than Allah (Al-Bukhari, 1976; Al-Qardawi, 1999; De Run et al., 2010).

Some main issues on the governance issues identified are: 1) Standardisation of Halal matters in Malaysia (across States) as religious matters are under the Rulers (Sultans) of each State; 2) incoherence implementation and enforcement across the States; 3) absence of comprehensive Halal Act to govern the whole agencies or mechanisms of Halal at the macro level. Conversely, at the micro level, operational issues are 1) Halal certification process; 2) Halal information and data management and handling; 3) weak enforcement and certification capacity; 4) abusing of Halal logo and Halal certification (see Ahmad Hishamuddin, 2007; Shahidan & Md Nor Othman, 2006; Noordin, et al., 2009).

Starting 1 August 2009, the agency responsible for Halal logo and certification has been reinstated to Department of Islamic Development Malaysia (JAKIM) – from previously Halal Industry Development Corporation (HDC) – a body to handle local and international Halal certification process (JAKIM, 2019). On 3 December 2018, the Government has expanded the Halal Hub Division into two main Sections – Council Secretariat Halal Malaysia (MHM) and Division of Halal Management (BPH). Operationally, BPH will be the main division that handles every aspects pertaining to Halal certification and enforcement; product and premise certification application, product and premise audit, issuance of Halal certificates, validation of foreign slaughter houses, monitoring and enforcement and centre for Halal analysis.

3. Research Methodology

De Ruyter (1996), Sekaran & Bougie (2009), and Walden (2006) highlight that focus groups are an effective instrument for qualitative study in order to obtain inclusiveness of understanding especially for new phenomenon and issues, such as Halal supply chain industry. In qualitative study, the data are collected through a series of interview and focus group (Sekaran and Bougie, 2009). Purposive sampling is used to select the participants composed of well-educated and articulate individuals, with the ability to understand and respond to detailed questions concerning specific issues of Halal governance as they are

practicing today. The sample frame drawn consists of Halal governance agencies and the participants or users.

The participants in this focus groups consists of six experts in formulation and implementation for Halal governance, following Cooper and Schindler (1998). Table 1 summarizes the respondents' details about the roles, position and year of service. The conversation between the participants is recorded using voice recorder devices with the consent from the respondents.

Table 1 Summary of Focus Group Respondents

Company	No. of Participants	Role of Agency	Position	Years in Industry
Agency W, X	3	Formulation of policies	Assistant Director	>7
			Councillor	>8
			Head Ass. Director	> 15
Agency Y, Z, K	3	Implementation of policies	Assistant Manager	> 9
			Head Assistant Manager	> 10
			Assistant Director	> 20

The discussion for the focus group is related to the critical issues, current problems, and challenges in Halal supply chain Industry especially the importance of Halal Governance and related agencies. The questions are designed for the respondents ranging from general to specific of the topic discussion to invite openness and avoid bias (Grudens-Schuck et al., 2004). Referring to (Miles and Huberman, 1994), the discussion will be concluded and drawn after the data has been analysed.

During the discussion, the issues were listed and highlighted for further actions. Table 2 shows the listing of issues and current challenges in Halal supply chain industry and Halal governance. The issues are categorized as below: The first category labelled ISSUE 1 consists of number 1, 2, 3 and 4, and is about political and institutional governance for Halal certification. ISSUE 2 consists of number 5, 6, 7, 8, 9 and 10 and they are on regulatory and operational efficiency for Halal related agencies. Last but not the least, ISSUE 3 consists of number 11, 12, 13, 14 and 15 and is about functional ambiguity of halal-related agencies.

Table 2 Issues in Halal Governance

No.	Topic encountered
1	No mother of law for Halal industry
2	Different practices for states and federal
3	Law scattered
4	Lack of expertise and knowledge
5	Lack of effectiveness and comprehensiveness for Halal laws
6	Lack of cooperation between agencies in implementing Halal activities
7	Differences in standards of practice among agencies
8	Abundance of work for certain agencies

9	Miscommunication among agencies
10	Conflicting roles: Y, Z and K in terms of implementation
11	Poor job performance
12	Misaligned goals of the Halal industry: W and X
13	Ambiguity of authority
14	Overlapping of functions: W and
15	Unclear functions and roles of agencies

ISSUE 1: Political and Institutional Governance for Halal Certification

Several issues have been highlighted in the institutional and governance group. The first issue indicates that governance for Halal bodies needs to be in a unified system. Currently, Halal governance has to go through many processes, the difference of the states and federal government and differences on decision making. Every decision that relates to halal, which is religious, takes a long time because the process is different for every state, and is not unified. Each of the states is different in terms of culture, practice, thought and leadership. Moreover, the certification body has no authority in Halal enforcement matters. Apparently, there are more than 20 different ministries and agencies that continue to have input in Halal regulations (Syed & Nazura, 2011). Thus, governance of Halal is unsystematic. Also, the confidence in Halal reassurance is mainly based on personal conviction, rather than on institutional confidence. Respondents of the focus group quipped that the best practice for shari'ah finance is Bank Negara Malaysia (BNM). Each activity and decision is made collectively by the state and federal government and under one entity leads by the BNM. They opined that the governance and structure of Halal industry should be placed under Economic Planning Unit – a Central Agency under the Prime Minister's Department (Economic). Some policy actions obviously are required as governance of Halal is disorderly in Malaysia (Syed & Nazura, 2011).

ISSUE 2: Regulatory and Operational Efficiency for Halal Related Agencies

From an extensive literature review, there were at least six Acts and eleven agencies that were relevant to the Halal food control (Noordin et al., 2009). Nonetheless, the non-existence of comprehensive Halal Act also contributed to the issue (ibid, 2009). Halal regulation is difficult to implement and it mainly covers imports, exports, inspection and enforcement (Mustafa Afifi, 2012). At state level, there is no body vested with authority to lead the Halal industry. JAKIM and Jabatan Agama Islam Negeri (JAIN) function in the Halal certification and administer the Halal certification operations by using the Halal standard, which refers to the Standard Malaysia (MS) and Malaysia Halal Certification for enforcement purposes. JAKIM and JAIN are dependent on the laws, which differ from other agencies. This causes the activities of enforcement to be less effective. The other agency such as MDTCC is under Trade Description Act (TDA) 2011 act that clearly stated roles and functions of the agencies. Ministry of Health (MOH) together with the Food Act 1983 and Food Regulations 1985 is responsible for aspects of labelling, hygienic practice and food safety; The Department of Veterinary Services (DVS) under the Animals Act is accountable for animals rearing and diseases control; while the Royal Malaysian Customs together with the Customs Act supervises the import of Halal meat, while The Halal Development Corporation (HDC) focuses on promoting Halal industry to the global market.

The interviews provide evidence that all respondents are aware that due to this scenario, it posed a constraint with regard to smooth cooperation among agencies especially in terms of implementation and enforcement of the Halal policy. The current conflicting outcomes among different agencies especially in carrying out enforcement matters was highlighted. JAKIM and Ministry of Trade, Co-Operatives and Consumerism (MDTCC) should collectively conduct enforcement activities; as JAKIM is not authorised to carry out prosecution of Halal matters by itself. At the same time, MDTCC needs to work together with JAKIM, as the enforcement power rests with the MDTCC to implement these activities. Many problems will occur if one of the agencies is not represented in matters of enforcement. Furthermore, on the issue of operational efficiency, the participants highlighted the lack of knowledge in Halal and Shari`ah principles also contribute to weak compliance. The related agency did not perform well due to insufficient expertise that is not only lacking in terms of training, but also resulting in poor job performance. Therefore, the needs for a body to ensure checks and balances in terms of practice and activities are strongly required. Courses relevant to investigation and prosecution must be conducted often to further enhance and create dedicated law enforcement officers. Relevant knowledge and exposure pertaining raids, prosecutions, inspections and knowledge of acts such as the Evidence Act, the Criminal Procedure Code and others (Roslan, 2012) must be enhanced. The participants also emphasized on SWOT analysis as a part of yearly activities to look into the weaknesses of each agency in ensuring the objectives, mission and vision of Halal industry will be smoothly achieved. It is advisable for all Halal related agencies to sit together and find solution to these issues.

ISSUE 3: Functional Ambiguity of Halal-Related Agencies

Past research shows that an organizational factor plays an important role to secure success and sustain the performance of Halal industry. In this regard, Halal integrity is the most influential factor in determining the adoption of Halal standard, thereby has positive effects on Halal orientation strategy (Zailani et al., 2015). Additionally, participants stated that Halal integrity should be driven primarily by a leading agency because of the rising needs for a strict shari`ah conformance and better monitoring process or standards. In Malaysia, even though Halal standards are specifically designed to ensure the Halal integrity of supply chains and logistics (Dube et al., 2016), the interviews found that the Halal integrity has yet to be effectively or strategically driven by any single regulatory body in the industry and its logistic practices. Until now, Malaysia's leading authoritative agency in the Halal industry that supposed to be a leader for the whole Halal industry in country still unresolved. As a matter of fact, Agency X was bogged down with a lots of task in terms of checking the Halal certification. Meantime, abundance of work such as monitoring and many other religious matters were also referred to this agency. It remains unclear whether the processing of foods and products care is based on the monitoring elements. For example, slaughter of meat and poultry to be conducted at abattoirs that adhere to the Islamic law (Riaz, 2018). The actual role of X agencies in the Halal industry is questionable and unclear. Sometimes, these agencies seem to performing the de facto roles as a leader to the Halal industry, however the recent re-organisation of the Halal Hub Division is still too early to see the impact. The ambiguity of the role of the agency has eventually lead to poor implementation in monitoring and the abuse of certified Halal logo. This raised public concern on the integrity of the products that bear Halal logo. According to Shahidan, Shafie & Md Nor Othman (2006), JAKIM itself lack of "enforcement" in the Halal industry. With recent spates of cases involving the abuse of Halal certification

reported widely in the media, the integrity of Halal supply chain itself is at stake as to leading to subsequent of issues pertaining to proper monitoring after being Halal certified.

4. Discussion and Conclusions

This study can be concluded based on the four issues encountered in Halal governance. The first issue is regarding the Political and Institutional Governance for Halal Certification. This governance of Halal is still being plagued by ambiguity and conflicts particularly at the operational level, hence making disarray among states. The agencies are constrained by the function since the states and federal are not able to work in tandem. The state has its own authority and no decision could be implemented if there is no agreement by the state itself. Secondly, is the issue of Regulatory and Operational Efficiency for Halal Related Agencies. Halal logo of products indicates that the products are Halal and toyyib, and act as guidance to the consumers in buying. However, the agency should monitor even after the Halal logo is given to the manufacturer. This issue also concerns the manufacturers or key players that do not have adequate understanding of shari`ah law. Accordingly, they fail to meet requirements by certification bodies as stipulated by the shari`ah law as they use Halal logo to market their products and only focus on profit and not the Halal per se. As the demand for Halal food products is expected to grow, there is need for Halal integrity and to ensure that the needs for process and ingredients of the Halal food consumers can be met and well protected. Thirdly, the issue of Functional Ambiguity of Halal-Related Agencies for Halal industry, link to the professionalism of Halal training community is needed where this community will educate and train regulators of the industry. Although this study managed to encounter issues related to Halal governance for Halal integrity in Malaysia, however there are more categories and sectors in the Halal industry to be included. This study covered Halal supply chain processes in categories that may be limited to certain sector; beef and the processes of giving Halal governance which involve Halal agencies from the government. Therefore, future studies should include more sectors in the Halal industry in Malaysia and also more views from government agencies.

To conclude, the study enlightens the fact that Malaysia's aspiration to become the hub for Halal industry is not without challenge. A number of themes regarding the Halal governance framework were transpired during the interview sessions. In conclusion, the dichotomy between federal government and state government within the unique political system characterized by parliamentary democracy and constitutional monarchy complicates the Halal governance in Malaysia. The government, regulators and the entire Halal agencies must be collectively involved in Halal related matters in this country to enhance compliance. Thus, in order to compete in current dual markets, it is imperative that the policymakers, regulators and industry stakeholders, to keep aligned with shari`ah requirements that represent the very essence of the basic tenets of Islam.

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Stock Market Efficiency: A Pooled Mean Group Approach

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Abstract

The efficient market theory has been widely focused on the market efficiency in the developed countries but not in the developing countries despite the valuable diversification opportunities developing stock markets offer. Therefore, the objective of this study is to examine the informational efficiency of stock markets in both the selected developed and developing countries. The informational efficiency is examined by the cointegration between stock return and its determinants, namely output, interest rate and exchange rate using the dynamics heterogeneous panel cointegration model over the period of 1994Q1 to 2016Q2. The results of the study reveal that there are long run relationships between stock return and the three observed economic indicators in the developed and developing countries. Evidenced by the information of real output and real interest rate that are impounded into the stock return, the study further revealed that stock markets in developed countries are semi strong form efficient. Therefore, one cannot use real output and real interest rate as trading rule to earn abnormal return in developed countries. On the other hand, the information on real output, real interest rate and real exchange rate have not fully captured by the stock return in the developing countries, thus demonstrate that these markets are informational inefficient. The overall findings suggest that output, interest rate and exchange rate can serve as important explanatory variables for the investors and policy makers in making investment and policy decisions by providing better understanding that the developed stock markets are relatively more informational efficient compared to developing stock markets.

Keywords: Stock Return, Informational Efficiency, Co-integration, Pooled Mean Group.

1. Introduction

Stock market is an important barometer for economic performance. By channeling the financial resources to fund the economic activities, stock market helps to promote economic development. Market participants, i.e. investors, security issuers or policy makers make decisions in the stock market based on a range of information attached to the stock prices. If the stock prices accurately reflect all available information, stock market is considered informational efficient. Financial theory advocates the market efficiency in three forms of hypothesis, i.e. weak form, semi strong form and strong form hypothesis (Fama, 1970). Weak form market efficiency hypothesizes that stock price cannot be predicted from past information; semi strong form market hypothesis proposes that stock

price reflects all publicly available information and strong form efficiency shows that stock price reflects all available private and public information.

The theory of efficient market has been widely tested in the literature (Jensen, 1978, Fama, 1991, Muradoglu & Metin, 1996, Giannellis & Papadopoulos, 2009). However, enormous of emphasis have been placed on the market efficiency in the developed countries and there are scant studies focus on the efficiency of the developing stock markets despite the valuable diversification opportunities these markets offer. Developed countries has better institutions and market structure, thus are perceived to be more efficient compared to developing countries (Bruner, Conroy, Estrada, Kritzman and Li, 2002; Steil, 2001; Tay & Gan, 2016). On the other hand, the pricing of assets in developing countries is different from the developed countries due to smaller market capitalization, speculative investment and manipulation, which may influence the ways information is incorporated into the stock prices. Despite scant study on the developing countries, this study is motivated by the lack of empirical literature that comparing the efficiency of both developed and developing stock markets. Therefore, a study of stock market efficiency across developed and developing countries may contribute to the existing literature and may provide valuable information to the investors and policy makers in their decision making.

Empirical study on stock return typically focused on output, interest rate and exchange rate. With regards to output, output that measure the growth of the real economic activities have positive impact on stock markets (Giri & Joshi, 2017; Ismail et al., 2016). Chen et al., (1986) find that output is positively related to the US stock return as evidenced by the changes in the industrial production that influence firm's cash flow. Avouyi-Dovi and Matheron (2006) point out that productivity growth rate granger causes cyclical component of stock return. Variations in the output reveal the changes of expectation of corporate earnings, which are reflected in the cash flow received by the firm, thus is important to determine stock return (Donangelo, 2014; Gallegati, 2008). Campbell and Shiller (2001) highlighted that the stock market analysts regard the boom of the stock prices is partly due to the growth of labor productivity.

The changes of interest rate have negative bearing on stock return through the rise in funding cost (Bjornland & Leitemo, 2009; Pirovano, 2012). Negative influence of interest rate on stock return in the developed countries may be partly contributed by the relatively more developed and mature capital markets (Assefa et al., 2017). Volatility of interest rates may have more impacts on sectors that are highly interest rate sensitive, i.e. banking industries, utilities, real estate, technology and telecommunications (Moya-Martínez et al., 2015). On the other hand, fluctuations in the interest rates that were succeeding by the monetary policy shocks may cut down the amount of cash flows received by firms therefore could dampen stock market performance (Laeven & Tong, 2012; Tobin, 1978). The changes of interest rate as a result of monetary policy announcement had more impact on small firms compared to larger firms (Thorbecke, 1997). This type of monetary policy shock was found to have more prominent effects on financially constrained stocks (Maio, 2014).

Exchange rate and stock market are found to be significantly correlated especially during the period of financial crisis (Wong, 2017). This is supported by Sui and Sun (2017) who show the significant influences of exchange rates on stock returns and observed worsen

spillover effects between exchange rates and stock returns during the period of financial crisis. An increase in the value of a currency made domestic currency more attractive and thus attract more capital to the local market (Yau & Nieh, 2009). The domestic currency appreciation may result in the risk of 'hot money' inflow that boost the stock market performance (Tian and Ma, 2010; Ülkü and Weber, 2014). Therefore, exchange rate may adversely affect stock market via volatility of the international capital funds that moved into the local market for the purpose of managing portfolio and pursuing better investment opportunities (Katechos, 2011; Liang, Lin and Hsu, 2013; Moore and Wang, 2014). However, changes in exchange rate may have asymmetric effects on the stock market (Bahmani-Oskooee and Saha, 2016).

The objective of this study is to examine the informational efficiency of stock markets in the developed and developing countries. The informational efficiency is tested by examining the cointegration between stock return and its determinants, namely output, interest rate and exchange rate. Four selected developed countries, i.e. Canada, Japan, United Kingdom and United States, and six selected developing countries, i.e. Indonesia, Malaysia, Philippines, Singapore, Thailand and China were included as samples of the study. The dynamics heterogeneous panel cointegration model proposed by Pesaran, Shin and Smith (1999) was used to identify the cointegration for the informational efficiency between the stock return and its determinants. This study may provide better understanding on the fact that the developed stock markets are relatively more efficient compared to developing stock markets and the three economic indicators: output, interest rate and exchange rate are important explanatory variables for investors and policy makers in making investment and policy decisions. The rest of the paper is organized as follows. Section 2 presents the model specification. Section 3 explains the data and methodology used in this paper. Section 4 discusses the empirical results of this paper and conclusions are presented in Section 5.

2. Model Specification

An efficient market is a market where the security prices quickly incorporated all available information (Fama, 1970). In an efficient market, any news which could affect the stock's performance has already reflected in the stock price. Therefore, it is not possible for the investors to consistently earn excessive risk-adjusted return. This study proposes that stock market is semi strong form efficient, i.e., all the past and publicly available information including information on economic indicators had impounded into the movement of stock return. This theoretical postulate requires the absence of cointegration between stock return and economic indicators which explained the incorporation of the past and publicly available information into the stock price and return. On the other hand, when there is cointegration between stock return and economic indicators, the stock market is consider violating the semi strong form efficiency.

This study characterized the informational efficiency of the stock market by the modified Fama model (1970, 1981) that encompasses output, interest rate and exchange rate in the stock reaction function. The general form of the modified Fama model is expressed as follows:

$$sr_t = f(y_t, ir_t, er_t) \quad (1)$$

where sr_t denotes stock return, y_t denotes output, ir_t denotes interest rate and er_t denotes exchange rate. The modified model is expressed in the following equation:

$$sr_t = \beta_0 + \beta_1 y_t + \beta_2 ir_t + \beta_3 er_t + \varepsilon_t \quad (2)$$

where β_0 is the constant, $\beta_1, \dots, \beta_3$ are the coefficients for each variable and ε_t is the error term. The estimated coefficients of β_2 and β_3 are expected to be negative, and the estimated coefficient of β_1 is expected to be positive.

Equation 2 proposes that output affected stock return via its positive impact on firm's profitability, which improved firm's cash flow and hence increased its stock price (Giri & Joshi, 2017; Naik, 2013). Interest rate is the opportunity cost of money that is negatively related to stock return. It could affect stock return negatively by variation on the cost of funding or changes on discount rate of the dividend that in turn decreases the expected future earnings of the firms (Assefa et al., 2017; Bjornland & Leitemo, 2009; Laeven & Tong, 2012). Exchange rate is inversely related to stock return through the movement of the currency (Moore & Wang, 2014; Sui & Sun, 2017). Fluctuations in exchange rate affect the term of trade thus have impacts on the firms' international competitiveness, which later reflects in the firms' production and earnings.

3. Data and Methodology

3.1 Data

The analysis for this study was conducted by using panel data, i.e. panel of developed countries and panel of developing countries. The samples of developed countries include Canada, Japan, United Kingdom and United States; while the samples of developing countries comprise of Indonesia, Malaysia, Philippines, Singapore, Thailand and China. The data were collected from the DataStream database spanning from the period of 1994Q1 to 2016Q4. Real stock return is indicated by the rate of return of the stock market index minus inflation rate. Real output is calculated by dividing the nominal gross domestic product by the consumer price index. The real interest rate is proxy by the short term interest rate minus inflation rate. The proxy for exchange rate is the real effective exchange rate which is computed by the sum of the real exchange rate multiply by the weights of major trading partners. The real output and real exchange rate are transformed into natural logarithm.

3.2 Dynamics Heterogeneous Panel Cointegration Model

The dynamics heterogeneous panel cointegration model was applied to examine the relationship between stock return and output, interest rate and exchange rate. The negative and significant error correction term in the model provides the evidence of cointegration between real stock return and economic indicators. The panel data analysis which includes the data for cross sections and time periods may provide numerous advantages over the time series analysis (Wu et al., 2013; Al-Iriani, 2006). For instance, panel data analysis may avoid problems related to the low power of standard tests on unit root and cointegration (Christopoulos & Tsionas, 2004).

The short run and long run relationships between stock return and economic indicators are examined by using pooled mean group (PMG) and mean group (MG) estimators for the dynamics heterogeneous panel cointegration models. PMG estimator that was proposed by Pesaran et al. (1999) allows the intercepts, short run coefficients and error variances to differ across groups while constrains the long run coefficients to be homogenous. The mean group (MG) estimator allows all the intercepts and slope coefficients to differ across groups and average estimation results of each group (Pesaran & Shin, 1995). The Hausman test is conducted to test the homogeneity of the long run coefficients and to select between MG and PMG estimators. If the long run homogeneity restriction cannot be rejected, the PMG estimator is more appropriate for the subsequent discussion. The advantage of PMG estimator is that the estimation from an autoregressive distributed lag (ARDL) regression for the PMG delivers consistent estimators regardless of whether the variables in consideration are $I(0)$ or $I(1)$ (Pesaran et al., 1999).

To capture the dynamics heterogeneous panel cointegration models, the long run model in Equation 2 is transformed into general autoregressive distributive lags, ARDL (1,1,1,1) dynamic panel specification as follows:

$$sr_{it} = \mu_i + \lambda_i sr_{i,t-1} + \delta_{10i} y_{i,t} + \delta_{11i} y_{i,t-1} + \delta_{20i} ir_{i,t} + \delta_{21i} ir_{i,t-1} + \delta_{30i} er_{i,t} + \delta_{31i} er_{i,t-1} + \varepsilon_{it} \quad (3)$$

The short run model is expressed as follows:

$$\Delta sr_{it} = \mu_i + \phi_i [sr_{i,t-1} - \theta_{0i} - \theta_{1i} y_{i,t-1} - \theta_{2i} ir_{i,t-1} - \theta_{3i} er_{i,t-1}] + \delta_{10i} \Delta y_{i,t} + \delta_{20i} \Delta ir_{i,t} + \delta_{30i} \Delta er_{i,t} + \varepsilon_{it} \quad (4)$$

where ϕ_i denotes error correction coefficient and $\phi_i = -(1 - \lambda_i)$, θ_i denotes the long run equilibrium relationship between sr_{it} and observed variables, $\theta_{0i} = \frac{\mu_0}{1-\lambda_i}$, $\theta_{1i} = \frac{\delta_{10} + \delta_{11}}{1-\lambda_i}$, $\theta_{2i} = \frac{\delta_{20} + \delta_{21}}{1-\lambda_i}$, $\theta_{3i} = \frac{\delta_{30} + \delta_{31}}{1-\lambda_i}$. From equation 4, a negative and significant value of error correction coefficient, i.e., ϕ_i suggests the presence of cointegration between the stock return and the observed economic indicators.

4. Empirical Results

4.1 Pooled Mean Group (PMG) estimator

Table 1 shows the results of pooled mean group (PMG) and mean group (MG) estimates based on an autoregressive distributed lag (ARDL) model over the period of 1994Q1 to 2016Q2. The error correction coefficients are negative and significant, i.e. -0.934, -0.959, -1.019, and -1.066 for both PMG and MG estimators in the developed and developing countries. These results propose that there are long run cointegrating relationships between real stock return and the economic variables, namely real output, real interest rate and real exchange rate. The results of Hausman tests show support of long run homogeneity in both the developed and developing countries, hence PMG estimators are preferred relative to the MG estimator. The subsequent discussion is therefore based on the results of PMG estimators.

Table 5.1 PMG and MG Estimations from 1994Q1 to 2016Q2

	Panel Developed Countries		Panel Developing Countries	
ARDL	(1, 1, 15, 11)		(1, 11, 2, 14)	
	PMG	MG	PMG	MG
Error Correction Coefficients	-0.934*** (0.105)	-0.959*** (0.103)	-1.019*** (0.055)	-1.066*** (0.051)
Long Run Coefficients				
y	2.368 (9.357)	33.17 (43.21)	5.580* (3.060)	18.74 (13.12)
ir	-0.344 (0.288)	-1.073* (0.637)	-0.544** (0.251)	-0.300 (0.624)
er	-15.38** (6.404)	-25.86 (18.41)	-15.83* (9.281)	-31.46 (24.73)
Hausman Tests	5.72 {0.126}		0.90 {0.825}	
Short Run Coefficients				
Δy			62.38*** (16.25) [9]	70.70*** (25.71) [9]
Δir	-2.466** (1.057) [6] -2.147* (1.097) [15]	-2.264*** (0.739) [6] -2.127* (1.162) [15]		
Δer	-38.59*** (13.78) [1]		-56.38* (28.82) [3] -39.81** (17.36) [8]	-57.15* (32.03) [3]
Constant	42.53*** (3.735)	-264.9 (528.6)	21.64** (10.43)	6.568 (139.2)

Source: Author's calculation using Stata software.

Note: The ***, ** and * denote statistical significance at 1%, 5% and 10% level. The numbers in parentheses are standard errors. The numbers in brackets are lag lengths. The lag order is selected based on the Schwarz's Bayesian criterion. The *p*-value for Hausman tests are reported in braces. The insignificant and incorrect expected signs of the short run explanatory variables are not reported in the table.

The PMG estimator imposes homogeneity restrictions in the long run parameters. Table 1 reveals that the long run estimates of the explanatory variables for both the developed and developing countries are consistent with the projected signs, i.e. positive for real output and negative for real interest rate and exchange rate. For developed countries, though all the three variables have correct signs, only real exchange rate is statistically significant at five per cent level. Therefore, higher exchange rate has negative impact on

stock return. The results reveal that the stock markets in developed countries are informational efficient related to output and interest rate, but are inefficient on information of exchange rate. For developing countries, the results of real output are significant and positive, while the real interest rate and real exchange rate are significant and negative. This suggests that increase in real output results in higher real stock return, while rise of real interest rate and exchange rate cause real stock return to fall in the developing stock markets. The results reveal that stock markets in developing countries are informational inefficient.

The above results suggest that stock return is influenced by the changes in the real production that directly affect the firms' cash flows (Chen et al., 1986; Donangelo, 2014). The significant negative influence of interest rate on stock return in developing countries is consistent with Pirovano (2012) who find the rise in the cost of funds may result in lower future cash flow of the firms, thus weakens the stock market performance. The significant negative relationship of exchange rate and stock return in both the developed and developing countries suggest that unanticipated rise in domestic currency can lead to unfavorable terms of trade that eventually lower the stock market performance (Katechos, 2011; Moore & Wang, 2014). The results of output on stock return in developed countries are consistent with the studies by Foresti (2006), Hall (2000), Poon and Taylor (1991) in the US and the UK stock markets. The insignificance of interest rate in explaining stock return in developed countries suggests that the expected changes in this variable are fully anticipated by stock markets.

Though long run parameters are restricted to be homogenous, PMG allows the short run coefficients to be varied across the observed groups. The results for changes of real output in the short run indicates that only the coefficients of changes of real output for developing countries are statistically significant at lag nine. On the contrary, only changes in real interest rate for the developed countries are found to be negative and significant at lag six and fifteen respectively. Changes of real exchange rate are reported to have negative correlation with real stock return in both groups. It is significant at lag one in the developed countries and lags three and eight in the developing countries.

4.2 Findings

Several findings can be drawn from the above results. Firstly, the negative and statistically significant error correction coefficients for both the developed and developing countries imply that stock market is cointegrated with three observed economic indicators in long run. Secondly, the real output and real interest rate are not statistically significant, while real exchange rate is significant in the developed countries. This finding reveals the stock markets in developed countries are semi strong form efficient with regards to real output and real interest rate, where the past and current news on these two variables have already discounted into the stock return. Hence, one cannot use real output and real interest rate as trading rule to earn abnormal return in the model that encompass these two indicators in developed countries. Thirdly, the performances of the three observed indicators are in accordance to their theoretical signs in the developing countries. The implication of this finding is that the stock markets in developing countries are informational inefficient with respect to real output, real interest rate and real exchange

rate, a result that is contrary to the propositions of efficient market hypothesis. This finding suggests that these economic indicators are indeed significant information variables that have not been efficiently discounted into the stock return. Fourthly, the results support that the developed countries are more efficient than developing countries as indicated by the informational efficiency of the real output and real interest rate that have impounded into the stock return.

5. Conclusion

This study is concerned with the informational efficiency of stock market by examining the cointegration between stock return and its determinants, namely output, interest rate and exchange rate in the selected panel developed and developing countries over the period of 1994Q1 to 2016Q2. The results of the analysis reveal that stock markets in the developed countries are semi strong form efficient with regards to real output and real interest rate. The results drawn from the PMG estimator support that developed countries are in fact more efficient than developing countries as evidenced by the incorporation of information of real output and real interest rate into the stock return. The results further reveal that information on real output, real interest rate and real exchange rate have not fully discounted into the stock return, specifically to the investors in the developing countries. In addition, the results of the error correction coefficients pointed to the evidence of cointegration between real stock return and the three observed economic indicators in long run for both the developed and developing countries. These findings suggest that output, interest rate and exchange rate can serve as important explanatory variables for the investors and policy makers in making investment and policy decisions by providing better understanding that the developed stock markets are relatively more efficient compared to developing stock markets. However, there are few limitations in this paper. Firstly, the present study only includes four developed and six developing countries as well as three variables in examining the informational efficiency of stock market. More countries and other variables such as behavioral variables and economic policy uncertainty may be included in the future study to build up the findings. Secondly, the present study conducts the analysis by using the PMG estimator, the future study may apply more advance model that can capture the asymmetric effect between the variables.

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Customer Preferences in Purchasing Residential Property: An Interview Survey

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Abstract

The economic crisis has prompted a pressing need for the housing property sector to enhance sales. Many developers face obstacles in catering the increasing demand and different customer tastes. Developers must deliver customer demands or risk experiencing losses and poor sales. The current study conducted an interview survey of 10 customers among chosen developer organizations in the Klang Valley. Analysis of the responses indicated that facilities, investment and location are what customers prioritize when choosing property. They also show a preference for condominiums and landed homes. These results suggest that developers must continue to apply relevant tactics in managing customer demands.

Keywords: House Property, Interview Survey, Customer Decision, Customer Purchase

1. Introduction

Malaysian property purchasing trends altered significantly in 2015 due to shifts in the economy, and as a result some property market related problems have emerged. The Malaysian Department of Statistics (2013) has estimated that 10 million people reside in urban areas like Kuala Lumpur, Penang and Selangor. However, many residents in these locations cannot afford to own property because price rates are significantly higher than their income levels. According to Malaysia's Real Estate and Housing Developers Association (REHDA), residential property prices in Malaysia are estimated to increase by an average of 13 per cent during the first half of this year. The spike in prices is not the result of effective and strong development, but due to the decline in customers' purchasing behavior. In a fast-paced and competitive global market, many developers in Malaysia purchase land and develop properties in order to cater to high buyer demands. High land prices, lack of available land, expensive land registration fees, and high costs of

construction materials mean that many people do not want to purchase land to build their own property. Instead, they choose condominiums, terrace houses, apartments, semi-detached homes, bungalows or other options that are offered by developers. Customers are also more selective with their purchasing decisions due to high prices in the property market. Stronger competition in the market also results in a wider range of choices for buyers. This study aims to investigate customer preferences when buying housing property in urban locations.

The deterioration of the currency and an unexpected drop in oil prices in mid-2015 resulted in huge consequences for the Malaysian commercial sector. A Star Newspaper report in August 2015 revealed that the property market was among the sectors which experienced the worst impact. This was attributed to the higher price of land and greater expenses for construction and energy. This contributed to a hike in the property prices in the Malaysian property market, particularly for properties based in urban locations. There is a significant increase in property prices annually. The Serenade project, a terrace housing project launched in 2015, has stagnated in sales and development due to exorbitant prices which makes it too inaccessible for purchase by customers. Many similar projects experienced decline when many of the houses failed to be sold. Contractors are also impacted when the sales volumes dramatically decrease, reflecting the shifts in consumers' behaviours and purchasing choices in the property market. As such, the current study carries the objective of determining buyers' preferences when choosing housing properties in selected areas within the Klang Valley, especially in the low sales units.

2. Literature Review

There are many factors which impact consumer choices in housing properties. They are outlined as follows:

2.1 Customer Preferences

The growing trend in construction of residential properties is a result of alterations in housing prices and changes in the base lending rate. There are six structural housing features which meet the preferences and demands of first-time home owners; namely bedroom, living room, bathroom, kitchen, built up and eco-friendly elements. Tan (2012) highlighted that the number of available bedrooms was strongly connected to home purchasing decisions. Green areas are also an important characteristic, and customers are prepared to spend greater amounts of money in order to be able to enjoy gardens and green spaces in their residential areas (Tajima, 2003). Additionally, advantageous locations which can guarantee good returns on investment also encourage buyers to select those properties (Daly et al., 2003).

2.2 Group Influences

The members of a group can have an impact on the individual through the influence of socialization and through association with one another. One of the factors which determines group influence is social class. Kotler (2008) defines class as a structured and immutable set of categories which gather people who share common values, interests and behaviours. Relatives and family members also function as crucial reference points for buyers. In addition, culture also plays a significant role. Culture refers to a collection of

values, behaviours, attitudes, habits possessed by members of a society at any one time or within a generation [Bennett & Kassarian, 1972 (cited in Abdul Hamid, 2006)]. However, it remains to be seen whether there will be changes in customer preferences as property price rates become increasingly costly, and whether the market will have solutions to cater to these changes.

2.3 Psychological

Psychological factors also drive individual choices and preferences in property purchases. These factors are personality, attitude, motivations and perception. Motivation refers to the individual's determination to make efforts in order to reach a desired objective [Engelet. Al. 1995 (cited in Gibler, 2003)] Attitude is the amalgamation of one's behavioural intentions, beliefs and cognitive emotional affects (Gibler, 2003). Perception is the process of identifying, choosing, structuring and interpreting stimuli in order to understand one's surroundings (Solomon, 1996). The buyer's social circumstances and environment play a significant part in impacting their perception. Studies have also addressed the growing demand for gated community living, whereby the desire for security is the major factor (Blakely and Snyder, 1997; Low, 2001; Landman and Schonteich, 2002; Blandy, 2006; Ritcher and Goetz, 2007; Asiedu and Arku, 2009). The increasing crime rate has made safety and security a priority for everyone, whether the the upper class, middle-income families, or even working class.

2.4 Price

Price functions as the facilitator in contexts where there is a commercial transaction or exchange. This can be in the form of business-based exchanges or the transfer of property from party to another. In the context of property development, the existing market price is the price that is offered by developers. Certain factors; accessibility, community concept, amenities, safety and prestige, determine whether this price can be modified and increased or decreased (Rahadi et al., 2012). There is also the existence of external and unrestricted factors which impact housing prices, the most pivotal of these being speculative behavior (Rahadi et al., 2013). The Malaysian property market has experienced a considerable hike in prices within the past fifteen years, most notably in the period between 2009 and 2012 which saw many substantial shifts in prices. The Malaysian Deputy Finance Minister (2011) revealed that the average price housing in Malaysia goes up by 20% per year, a phenomenon that has been established after 2007 and has continued. This a deep concern and gives rise to various critical problems in many areas. Annual price increments at such high rates do not correspond with the yearly rate of income growth among the Malaysian population.

Le (2015) attributes the considerable growth of the house price index in Malaysia within the past ten years to the increase in global oil prices and the nation's expanding labour force. It is asserted that the existing conditions of the housing market is a result of economic distortion as opposed to true economic growth. The property market may experience tremendous upheaval if the current situation persists (Ong and Chang, 2013). No new properties in Kuala Lumpur in 2014 recorded costs between RM200, 00 TO RM500, 000, reflecting the increasing prices and inaccessibility of the market. The budget range for these new property launches were between RM500, 000 to RM 1 million instead (Ram, 2015).

2.5 Financial Loan

The increase in the base lending rate in 2009 was the factor which prompted the deterioration of the Malaysian property market. It is speculated that retail buildings and office spaces will be in surplus. Currently, there is an oversupply of condominiums and similar luxury properties. Nadharaj (2015) points out that Bank Negara has initiated a series of cooling measures to cope with increasing household debt, which comprises nearly 87 per cent of gross domestic product (GDP). Almost half of all household debt is made up of property loans, which prompted Bank Negara to put regulations in place which would restrict the approval processes for home loans. This is intended to mitigate the burden of household debt in Malaysia. At the moment, there is a 30 per cent rejection rate for housing loan requests. This has significantly impacted the Malaysian property market in many ways. A 2014 survey was conducted among members of the Real Estate and Housing Developers Association Malaysia and findings revealed that most respondents saw a marked decrease in property sales. According to Roulac (1999), the four essential features in attracting property buyers are promotion, public relations, telemarketing and advertising. However, all these are ineffectual when the economy was in a poor condition. This is due to high property prices and the existence of more rigid conditions for loan approval, making it more difficult or unappealing to purchase property. The marketing approaches highlighted by Roulac also typically catered to high-income buyers as opposed to middle class consumers.

2.6 Interior Design and Facilities

In Malaysia, there is an issue where housing projects are constructed with poor workmanship and conditions. This is related to conventional construction practices, whereby the construction methods used dependent entirely on human skills as opposed to manufacturing product (Kendall, 2004; Sufian, 2008; Zairul & Rahinah, 2011). These conditions discourage home buyers from making purchasing decisions. Additionally, there is currently a lack of local skilled labour in Malaysia. This prompts the need to source and bring in foreign workers to compensate for this deficiency. Such a situation can result in the hiring of unprofessional foreign workers by developers in order to lower costs and increase profits, due to the fact that international skilled workers will incur more expenses. Good infrastructure is a crucial element in attracting sales in residential areas. Lawrence (1995) posits that environmental quality plays a significant role in determining the dynamic of supply and demand, by showing that the availability of amenities and the accessibility of a property's location create a higher demand for that property. It is advantageous for a residential property to be easily accessed from other locations, and to allow the resident to conveniently travel to other places. Tan (2012) also identified six structural features which are of particular importance to first-time prospective home buyers in Kuala Lumpur, and these characteristics are the bedroom, bathroom, kitchen, living room, eco-friendly design and built up environment. The number of available bedrooms also influenced home ownership. This is of particular importance to families. Malathi (2014) asserts that affordable condominiums will be in increasing demand due to the needs and preferences of young professionals and young couples. The most preferred types of property by the general population are condominiums and terrace homes. New families in urban locations show a strong preference for condominiums due to the convenient location in city centers. Condominiums are also more affordable than terrace houses on the basis of the surrounding built-up area.

3. Methodology

An interview was conducted with 10 customers at a selected property developer office in the Klang Valley. Structured questions were asked with the intention of identifying the customer's preferences when buying property. The current study set the specifications of the customers as follows:

- i. Awareness of their own behavior and tastes with regard to buying property
- ii. Customers who come to the office (walk-in), customers selected from property expo events as well as potential customers.
- iii. The respondents are residents of Selangor

4. Result and Discussion

4.1 Customer Preferences

The findings revealed that the factors prioritized by customers when purchasing property are investment purpose, amenities, facilities and number of family members. Customers wish to secure property in strategic locations which can improve their quality of life. This includes factors such as the property proximity to their workplace, hospitals and shopping malls. Customers also consider the availability of amenities such as gyms, swimming pools and theme parks before deciding to purchase a certain property. Convenient access to public transport services, such as trains, buses and taxis, is an important preference for customers as well. Buyers wish to live in locations which can be easily reached, and also allow them to conveniently travel to surrounding areas for work or leisure. Those with large families prefer bigger properties with more effective security features to safeguard against robbers, break-ins and other potential threats. Additionally, the majority of individuals expressed a preference for landed houses, condominiums and service apartments. Table 2 summarizes the results of the interview.

A gap analysis in the context of this study can be seen in the findings of Daly et al (2003) which highlights location as being the most important factor which is accounted for among customers who desire to purchase property. Studies based in the UK, Australia and Ireland indicated that location and access to amenities are crucial considerations for prospective property buyers in those respective nations. When the developer fails to meet the demands of consumers according to the necessary criteria, this will result in a gap. For example, this can be the case with a housing project which was in an isolated location with no infrastructure such as hospitals, schools or accessible public transport. These results reveal that the success of a property project is contingent upon consumer preferences.

Table 1 Factors of Customer Preferences

Respondents	Factors to purchase	Property Preferences
1	Location, facilities and amenities	Service apartment with a shopping mall
2	Numbers of family members	Condominium with full facilities
3	Area, community, facilities and amenities	Landed House
4	Location	Landed House
5	Location	Apartment and condominium
6	Comfortable house	Terrace House
7	Investment purpose	Services Apartment
8	Location and amenities	Landed House
9	Investment	Service apartment
10	Investment	Landed House

5. Conclusion

The objective of this study is to determine customer preferences when buying housing property through selected developers in the Klang Valley. A survey interview indicated that location, amenities, facilities, and security of their family are the main prerequisites for customers. Guarded housing areas are preferred and consumers are willing to spend more in order to guarantee their safety.

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Determinants of Job Satisfaction: How Satisfied Are Employees at Public Universities

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Abstract

The success of an organisation depends a lot on its employees' satisfaction in carrying out their roles and duties. Thus, job satisfaction is seen to be a significant predictor of employees' work-related well-being. The current paper aims to determine the employees' role within the organisation in relations to job satisfaction, as well as to determine whether working environment contributes to job satisfaction. The paper also aims to examine the employer-employee relationship in accomplishing job satisfaction. This study was conducted in a branch campus of a public university consisting of 17 lecturers. It uses quantitative method by means of a survey consisting of 18 items that are divided into three parts which include role within the organisation, working environment and relationship with superior. The results were tabulated using descriptive analysis. The findings show for the role of employees in the organisation, there were a small number of employees who did not feel valued by the organisation. This could be contributed by their not gaining permanent status of employment. The findings also showed that a small number of employees found that the workplace environment is stressful. These employees had less than three years of work experience which could cause them to have problems adapting fully to their work environment. Finally, it was found that the lecturers felt they were treated with respect by their superior and their relationship with their superior was generally good. It is recommended for future research to consider a more comprehensive study involving a larger scale of respondents from public and private universities.

Keywords: job satisfaction, employees' role, working environment, employer-employee relations

1. Introduction

Most employees seek to be employed in an organisation that is well-established and able to provide them with stability and career development. When an employee's needs are satisfied in the place of employment, the employee would be compelled to work harder and be motivated to contribute to the advancement of the organisation. Achieving job satisfaction would hence contribute to the success of the organisation. Employees are the backbone of the organisation, and therefore, should be provided with good working conditions to enhance their job satisfaction as job satisfaction is the key to retaining good employees in the

workplace. Employee satisfaction is generally related to their commitment to work, dedication and performance. Unfavourable working conditions can influence employees negatively causing health problems and dissatisfaction at work (Hossen, Hossain, Rana and Ismail, 2019).

Sehgal (2012) states that the success or failure of any organisation lies within the employees' satisfaction level. Hardworking, satisfied and happy employee are the biggest asset of the organisation and it is thus very important to manage human resources effectively and to find out whether they are satisfied with their employment. Once the organisation is able to meet the expectations of the employees, job satisfaction can be attained.

It is however, not an easy task to satisfy the needs of every employee with different attitudes and characters in an organisation. How can employees fill their role within the organisation? Does the working environment contribute to doing one's job well? How does relationship between employers and employees play a role in accomplishing job satisfaction? In line with these queries, this paper intends to consider the following objectives:

- i. To identify the employee's role within the organisation in relations to job satisfaction
- ii. To determine whether working environment contributes to job satisfaction
- iii. To examine the employer-employee relationship in attaining job satisfaction

2. Literature Review

The role of an employee for the functioning of the organisation is very important as it helps the organisation to achieve its targeted goals. Human capital in an organisation helps the organisation build a solid foundation for profitability and success (Sehgal, 2012). As such, keeping employees satisfied in the organisation is essential so that they can perform. Yang and Kim (2013) explained that salary, benefits and remuneration packages offered by the organisation can increase the job satisfaction of employees. Do Hai (2012, as cited in Daud, 2016) states that opportunity for growth and promotion are also important in achieving greater levels of job satisfaction. Daud (2016) asserts that there are several factors that contribute to job satisfaction which include maturity level of the employee, relationship status between the employees and their superiors, educational level, years of experience, managerial ranking, organisation size, salary and opportunities for growth. According to Goulet and Singh (2002), it was found that employees who feel valued understand their role in achieving the organisation's goals and have career commitment towards their job.

In a study conducted by Sharma and Jyoti (2009) on factors affecting teacher satisfaction, there were three main aspects that were pointed out for job satisfaction of university teachers and these were intrinsic, extrinsic and demographic factors. Besides the academic office, salary, relationship between colleagues, promotion and recognition, the aspect of physical environment was also highlighted as an important element towards achieving job satisfaction. Feng Bolin (2007) supported this, stating that the effects of examination stress, perceived occupational status and leadership evaluation had a correlation with self-fulfilment, salary and the relationship between leader-employee and collegial relations.

According to Crossman and Abou-Zaki (2003), one key factor towards determining job satisfaction is the relationship between managers and employees. Chegini, Isfahani, Mohseni, Khahian and Khosravizadeh (2014) in a case study, asserted that there was a significant relationship between job satisfaction and working conditions followed by employer's supervision, work nature, co-workers and salary and promotion opportunities. In another case study on the impact of working environment towards employee job satisfaction

by Tio (2014), it was reported that work environment contributed significantly to job satisfaction and recommended that companies paid more attention to the work environment of their employees. Raziq and Maulabaksh (2015) also supported the argument that working environment can have positive impact on job satisfaction.

In relation to the objectives of the present paper, previous studies have shown that there are a number of factors that contribute to job satisfaction in various working environments. Particularly in the field of education at higher learning institutions, it would be interesting to find out the job satisfaction determinants among lecturers of a local public university. As such, the following section of this paper will concentrate on the methodology of the research, the results and findings as well as the conclusion and recommendations.

3. Methodology

This section of the study discusses methods applied to the research. The research focuses on job satisfaction among the lecturers from the Academy of Language Studies in the Rembau Campus of Universiti Teknologi MARA. The criteria of the respondents were based on their years of service, gender, job status, marital status and ethnic background. There were 17 lecturers from the Academy of Language Studies who attended a two-day Intensive Course for Lecturers on work ethics but only 13 participated in the survey.

This research uses the questionnaire as its tool for research measurement. The items for the questionnaire were adapted from Reynolds (2017) and Best Companies Group "Employee engagement and satisfaction survey". The questionnaire is chosen as a measuring tool for this research because it is reliable for the purpose of collecting information from multiple respondents in an efficient and timely manner. They were distributed after the end of the intensive course. And consisted 18 questions which were divided into three parts. Part A "My role within the organisation" contained items about the type of work that the lecturers do, their values in the organisation, their feelings as part of a team working towards a shared goal, the reasonable balance to maintain work and personal life, the requirements of the job that makes good use of lecturers' skills and abilities, the important role of the lecturers to the success of the organisation and adequate opportunities for career development. Part B "My work environment" contained items about whether the workplace has the tools and technologies that lecturers need to do their job well, whether the working environment is comfortable, whether the work culture is stressful, whether the lecturers feel connected with colleagues, and whether they are able to approach their superior to discuss matters. Part C "My relationship with my immediate superior" contained items about whether the superior treats the lecturers with respect, handles lecturers work-related issues satisfactorily, acknowledges when the lecturers do their job well, and tells lecturers when the work needs to be improved as well as helps the lecturers develop their fullest potential. The data collected from the questionnaire were then tabulated and analysed using descriptive analysis.

4. Results and Findings

4.1 Respondents' Demographics

Out of 17 questionnaires that were handed out after the intensive course, only 13 responded to the survey which is 76.4% deemed usable as the final data for analysis. Table 1 gives the demographic profile of the respondents.

Table 1 Respondents' Demographics

		n	Percentage
Ethnic group	Muslim	9	69.2
	Non muslim	4	30.8
Marital status	Single	6	46.2
	Married	7	53.8
Job status	Full time	2	15.4
	Part time	9	69.2
	Contract	2	15.4
Gender	Male	1	7.7
	Female	12	92.3
Years of Service	>3 years	8	61.5
	3-5yrs	1	7.7
	< 5 years	4	30.8

From Table 1, it was found that majority of the respondents are Muslims (69.2%), with more than half being married (53.8%). Majority of the lecturers are part time lecturers (69.2%). Majority of the respondents are female (92.3%) and most of the respondents have less than 3 years of experience as a lecturer.

4.2 Role of Employee within the Organisation

Figure 1 shows the view of employees towards their role within the organisation. It is important for an employee to understand his or her role in the organisation in order for him or her to gain work satisfaction. Seghal (2012) pointed out that lack of comprehension in one's job function can contribute to dissatisfaction at work. The chart in figure 1 shows that all of the lecturers like the type of work they do (100%), are able to maintain a reasonable balance between work and personal life (100%), believe that their job makes good use of their skills and abilities (100%), their work is meaningful (100%) and their job provides adequate opportunities for career development (100%). Most of the lecturers feel that they are part of a team sharing a shared goal (92.3%) and that they understand the importance of their role to the success of the organisation (92.3%). 84.6% of the lecturers feel valued in the organisation.

4.3 Employment Environment

Figure 2 shows the view of the employees toward their place of employment. In previous literature, it was reported that the work environment can contribute to job satisfaction of employees (Tio, 2014). From the chart in figure 2, 100% of the lecturers agree that their workplace has the tools and technologies they need to do their job well. 92.3% feel comfortable in their work environment and feel connected to their colleagues. 84.6% of lecturers stated that they are able to approach their superior to discuss matters. 76.9% agreed that the work culture was not stressful.

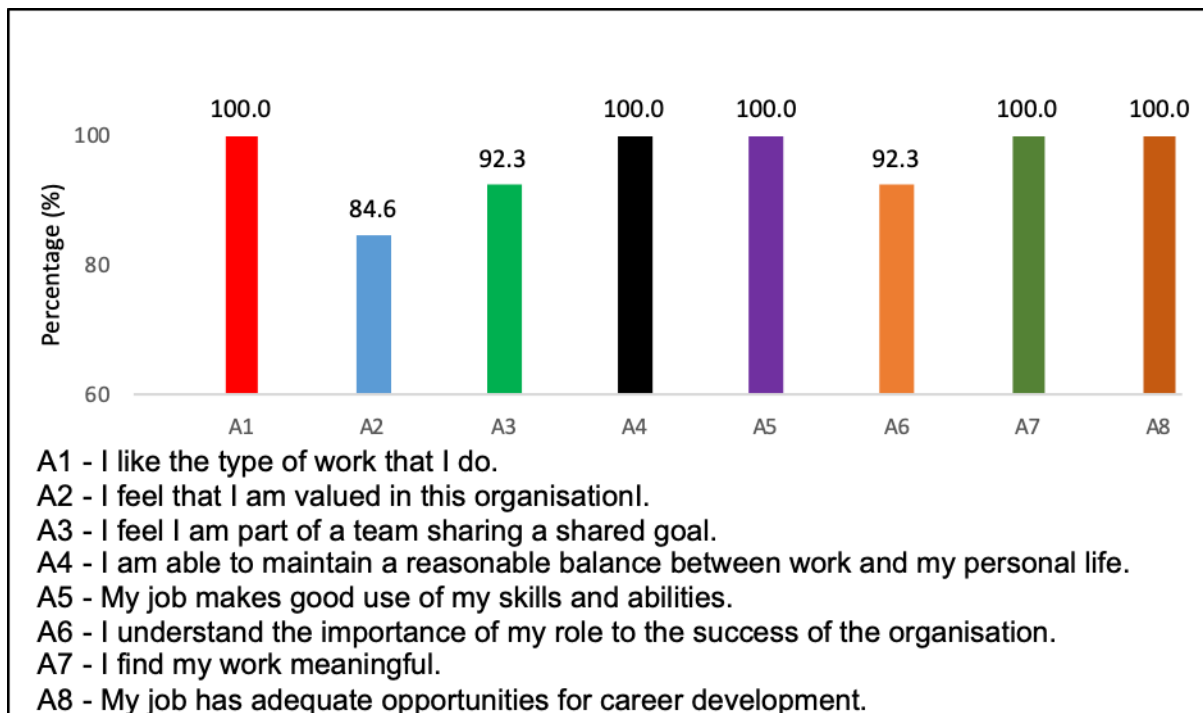


Figure 1 Employees View of their Role in the Organisation

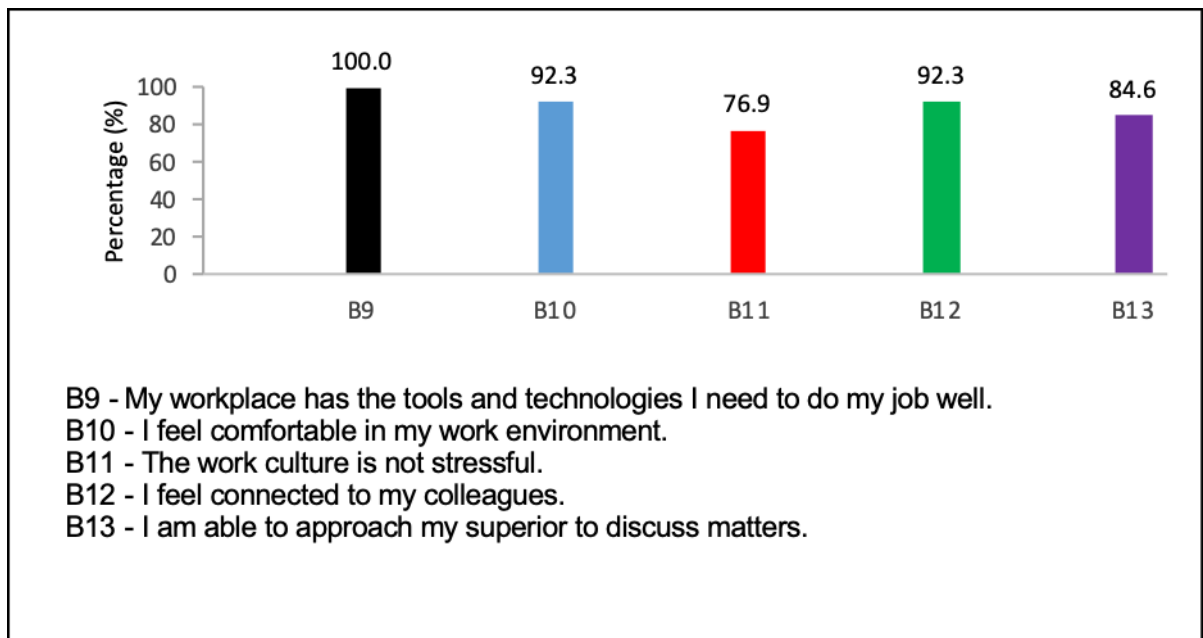


Figure 2 Employees view of their work environment

4.4 Relationship between Employees and their Superiors

Figure 3 shows the relationship between the employees and their superior and can affect the job satisfaction of the employee (Crossman & Abou-Zaki, 2003; Chegini et al., 2014). The

chart in figure 3 shows that all the lecturers (100%) agreed that they were treated with respect by their superior, work-related issues were handled by the superior satisfactorily, their jobs were acknowledged, they were informed when their work needed improvement and they were helped to develop to their fullest potential.

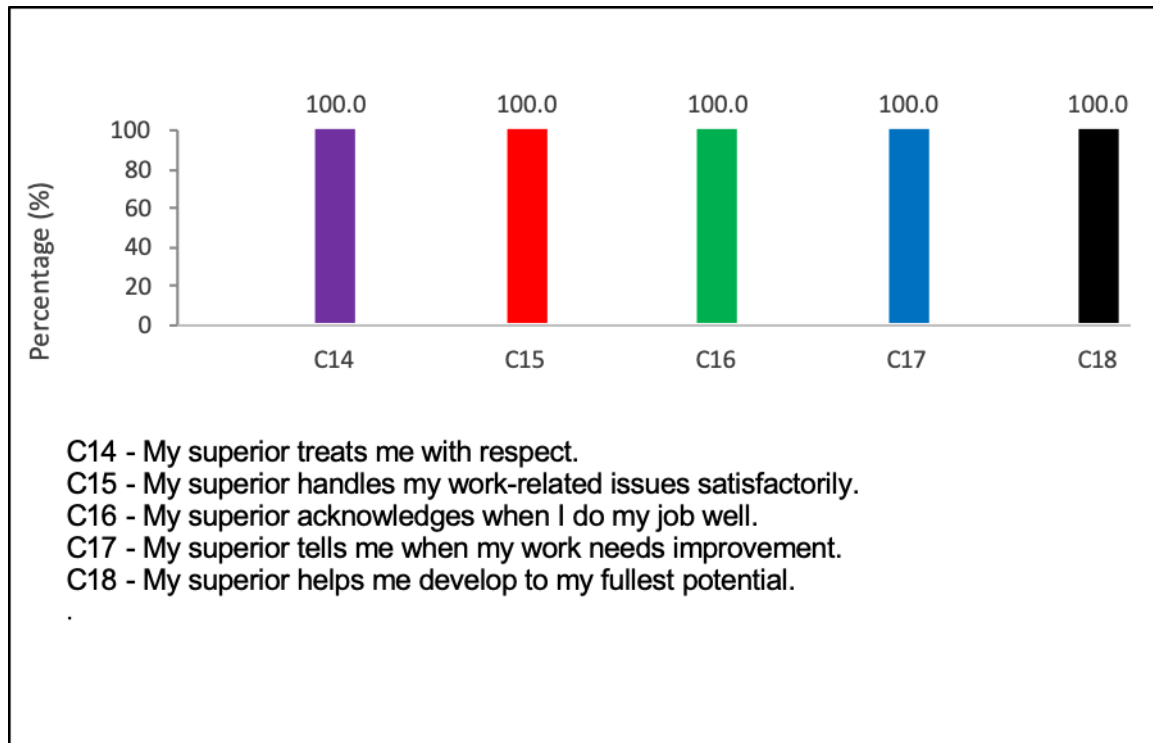


Figure 3 Employees view of their relationship with their superior

5. Conclusion and Recommendation

Thus far, this paper has tried to determine the job satisfaction of lecturers at public universities by means of three major aspects. First, the role of employees in the organisation showed that there was a small number of employees who felt they were not valued by the organisation. The demographic profile indicated that most of the employees were not permanent lecturers, but had worked for the organisation for more than 5 years. This may have contributed to their feelings of being less appreciated by the university. The findings also showed that there were a small number of employees who felt that they were not part of the team, sharing the same goal as the organisation. Further, there were also a few who did not understand their role to the success of the organisation. This could be due to their status in the university as part time lecturers who are employed based on the intake of students and number of classes each semester. If their services were not needed for any particular semester, they would not be employed. The situation actually puts these lecturers in a spot with lack of career development or employment benefits.

Second, job satisfaction in relation to the workplace environment showed that a small number of employees found the workplace environment stressful. There were also a few employees who found it hard to approach their superior to discuss their problems. A few employees also mentioned that they were not comfortable with the environment and not connected to their colleagues. The reason for this could be due to the fact that most of the respondents were employees with less than 3 years of working experience. Normally, it takes time to adapt to a new working environment and therefore, being new could post some

stress. This could also be the reason why these few were not comfortable to the new environment and their colleagues.

The third aspect discussed in this paper is the relationship between the employee and their superior. It was found that all the lecturers felt that they were treated with respect by their superior, work-related issues were handled by the superior satisfactorily, their jobs were acknowledged, they were informed when their work needed improvement and they were helped to develop to their fullest potential.

In conclusion therefore, the findings in general indicated that majority of the lecturers are satisfied with the role they play in the university as lecturers. Majority of the lecturers also felt satisfied with their working environment. All of the lecturers were satisfied with their relationship with their superior. However, the study was only based on a small number of lecturers employed in a local public university and therefore cannot be generalised to reflect all public universities. Hence, for future research, it is recommended that a more comprehensive study on a larger scale be conducted involving both public and private universities.

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Intellectual Capital and Corporate Entrepreneurship Toward Firm Performance: A Preliminary Study

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Abstract

Studies have been carried out on intellectual capital but the role of corporate entrepreneurship in explaining the relationship between intellectual capital and firm performance is still scarce especially in SMEs perspective. This preliminary study investigates the relationship of intellectual capital, corporate entrepreneurship and firm performance of SMEs in Malaysian tourism industry. The preliminary study involved 68 SMEs in tourism industry. The results showed a positive significant effect between intellectual capital and firm performance. Corporate entrepreneurship played a strong role as a mediator between intellectual capital and firm performance. The findings contribute to the body of knowledge and SMEs in tourism would further benefits if intellectual capital is properly addressed. Recommendation and suggestion are provided.

Keywords: Intellectual Capital, Corporate Entrepreneurship, Firm Performance.

1. Introduction

Tangible and intangible resources are vital for an organization and they are utilized by firms in strategies planning and execution (Barney & Hesterly, 2015). Example of tangible assets are physical resources such as equipment, inventories and factories while the intangible assets are non-physical resources such as knowledge, reputation and brand (Stead & Stead, 2016). SMEs could perform better when they manage to efficiently exploit tangible and intangible resources. Based on current studies, intangible resources such as

intellectual capital are vital in helping companies to achieve sustainable competitive performance (Ying, Hassan, & Ahmad, 2019). In addition, it has been suggested that intangible resources and capabilities contributed more greatly to firm performance as compared to tangible resources (Kamasak, 2017). Moreover, recent review of 54 empirical researches on intellectual capital and firm performance, Inkinen (2015) posited that intangible resources like intellectual capital are vital for the success and performance of firm.

According to Zahra (2015), corporate entrepreneurship is another source of knowledge that allow firms to innovate, rejuvenate organizations, creating competency to venture in new market, achieve growth and enhancing productivity (Zahra, 2015). Any entrepreneurial activities within an organization like innovation, corporate venturing and strategic renewal are considered corporate entrepreneurship (Kuratko, Hornsby, & Hayton, 2015). During the transition from traditional economy to the knowledge-based economy, corporate entrepreneurship plays an important roles toward higher performance, competitiveness and productivity (Kuratko & Audretsch, 2013).

Intellectual capital has becoming one of important issues in management (Todericiu & Stăniț, 2015). In the context of developing country, there were lack of studies had been conducted in the role of intellectual capital on the success and performance of firms (Kanchana & Mohan, 2017). Furthermore, large firms are still in the front seat in exploiting intellectual capital as compared to the SMEs (Nghah, Salleh, Wahab, & Azman, 2016). In addition, there is still room to explore in the relationship between intellectual capital and firm performance as there was lack in clarity (Hsu & Wang, 2012). Moreover, even though there are corporate entrepreneurship within the SMEs that is used to overcome their lack of resources problem, there are limited researches in this context (Nason, Mckelvie, & Lumpkin, 2015). Therefore, the main objective of this preliminary study is to gauge the reliability and validity of the instrument that will be used for further research on the role of corporate entrepreneurship as the mediator between intellectual capital and firm performance.

2. Literature Review

2.1 Intellectual Capital

Intellectual capital is an intangible resources that is quite complicated to measure or valued as compared to tangible assets that have monetary value (Pastor, Glova, Lipták, & Kováč, 2017). Since the 1990's, the definitions and concepts of intellectual capital have been widely discussed by scholars. Intellectual capital was defined as an intellectual material that has been utilized to produce a higher valued asset (Klein & Prusak, 1994). Later on, intellectual capital has been conceptualized as a combination of intangible resources and activities that enable firm to transform its resources in a system that capable in creating value (Marr, Schiuma, & Neely, 2004). Ordóñez de Pablos (2003) suggested that intellectual capital is either static or dynamic. Intellectual capital that is considered static is knowledge, which is currently available inside a firm. Meanwhile, intellectual capital that is considered dynamic is firm activities that involves knowledge and creating new resources such as ability for self-renewal, change capabilities and value creating process (Kianto, 2007).

There are several types of knowledge-based resources in intellectual capital and three-dimensional categorisation of intellectual capital are human-centred, organisational-centred and relational-centred, where these categories have been generally accepted as the standard for measurement model of intellectual capital (Inkinen, 2015; Secundo, Dumay, Schiuma, & Passiante, 2016). The first dimension is human-centred capital that refers to workers and their knowledge, capabilities, skills, characteristics and education (Bontis, 1998; Edvinsson & Sullivan, 1996; Stewart, T., & Ruckdeschel, 1998). The second dimension is organizational-centred capital such as organisational capital and structural capital that consist of the intellectual properties of the firm, tacit knowledge inside the information technology system, the outcome and product of knowledge conversion like databases, documents, plans and process descriptions as well as all intangible non-human knowledge inside a firm (Bontis, 1998; Edvinsson & Sullivan, 1996; Stewart, T., & Ruckdeschel, 1998). Lastly, the relational-centred capital like customer and relational capital that include the valuable relationships with external stakeholders such as the customers, suppliers, distributors, partners, the local community and all the related parties (Dzinkowski, 2000; Edvinsson & Sullivan, 1996; Roos & Roos, 1997). This three-dimensional categorisation of intellectual capital was described by pioneering scholars where the fundamental components are almost identical even though there are slight terminological differences between the definitions.

Intellectual capital components namely human capital, structural capital and relational capital have a positive effect on the financial performance of SMEs in tourism industry like the hotel industry (Sardo, Serrasqueiro, & Alves, 2018). SMEs with higher intellectual capital strength exhibited higher radical and incremental innovation performance (Agostini, Nosella, & Filippini, 2017). Furthermore, SMEs are able to sustain performance and growth using intellectual capital, which is considered their strategic asset (Shaari, Isa, & Khaliq, 2018).

2.2 Corporate Entrepreneurship

Current global economy is highly competitive and firms are required to become more entrepreneurial whilst engage in entrepreneurial activities in order to become competitive, survive the competition and improve performance (Dess, G. G., & Lumpkin, 2005; Bloodgood, Hornsby, & Hayton, 2013). The success of firms especially small businesses depend on entrepreneurial competency of the firm (Radzi, Nazri, & Nor, 2017). These entrepreneurial activities within firms are referred to as Corporate Entrepreneurship (Kuratko et al., 2015).

Corporate entrepreneurship is referred to a process where individual inside organization pursuing new opportunities or engage in new activities using available resources within the organizations (Hisrich & Ramadani, 2017). There are three main component of corporate entrepreneurship namely innovation, corporate venturing and strategic renewal where scholars mostly used as a single meta-construct due to their complementary and mutually supportive concept (Sakhdari, 2016).

Corporate entrepreneurship has a significant and positive effect on firm performance (Bierwerth, Schwens, & Ru, 2015). SMEs that engaged in corporate entrepreneurship experienced superior performance (Yunis, El-Kassar, & Tarhini, 2017). Meanwhile, previous studies showed that corporate entrepreneurship mediates the relationship

between external environments environment (Kearney, Hisrich, & Antoncic, 2013), technological skills capacity (García-Morales, Bolívar-Ramos, & Martín-Rojas, 2014) as well as IT capabilities (Chen, Wang, Nevo, Benitez-Amado, & Kou, 2015) with firm performance. Based on these literatures, it can be suggested that both intellectual capital and corporate entrepreneurship play an important role in the performance of SMEs.

There is a paucity in study on the role of intellectual capital and corporate entrepreneurship on the performance of SMEs in the service sector especially the tourism industry in Malaysia. While intellectual capital has been generally accepted as a determinant for firm performance especially in the knowledge-based economy, the role of corporate entrepreneurship is yet to be widely explored in explaining the relationship between intellectual capital and firm performance. SMEs which can capitalise their intellectual capital by turning human capital, structural capital and relational capital into sources of superior performance through corporate entrepreneurship are expected to perform better and survive the current dynamic and highly competitive market.

2.2 Firm Performance

Firm performance is the combination of financial and non-financial dimension namely profitability, growth, customer satisfaction, employee satisfaction, social performance, and environmental performance (Santos & Brito, 2012). Firm performance usually measured using financial data (Walker & Brown, 2004) and it is still relevant (Yip, Devinney, & Johnson, 2009). However, SMEs in Malaysia tend to use the combination of financial and non-financial measures in evaluating their firm performance (Chong, 2008; Nasip, Hassan, & Muda, 2015).

SMEs especially in tourism industry are encouraged to use non-financial measurement in gauging their performance (Mjongwana, 2018). There are consensus in literature regarding the need to combine financial and non-financial performance indicators (Van Looy & Shafagatova, 2016). Consequently, this study will use the combination of financial and non-financial measures in measuring the firm performance. Seven items namely return on investment, financial performance, sales growth, productivity, numbers of complaints, customer satisfaction and employee satisfaction will be used to measure the overall firm performance of the SMEs in the tourism industry (Ramayah, Samat, & Lo, 2011). Likert scale was used to indicate the performance of their respective firms using scale ranging from 1 (strongly disagree) to 5 (strongly agree).

3. Research Methodology

This study used the scales adopted and revised from previous studies to fit in this study to ensure the validity and reliability. The scales of intellectual capital are taken from Carrington (2009), corporate entrepreneurship are adopted from Dai, Mao, Zhao, & Mattila (2015) and firm performance was from Ramayah et al. (2011). The scale range from 1 (strongly disagree) to 5 (strongly agree). The survey was conducted on the list of randomly selected SMEs in tourism industry. Online survey was utilized as it is proven fast, efficient and cheap (Bista & Saleh, 2017). Collected data was analyzed using Smart PLS 3.2.7 and SPSS version 23 to analyze this preliminary study.

3.1 Respondent Profile

The sample obtained randomly from the list of SMEs in tourism industry, which is downloaded from Malaysian Tourism Ministry's website. The survey was conducted for a month in October 2018. Randomly selected companies were called and invited to participate in the survey.

A power analysis was performed using G-Power software to determine the appropriate minimum sample size for this preliminary study (Faul, Erdfelder, Lang, & Buchner, 2007). A minimum of 68 sample is required to conduct a preliminary study with 5% probability and 80% confidence. From a total number of 246 online survey sent, 68 responses have been collected. That represent around 28% response rate.

Overall, majority of the respondents was female (60%) while male represented 40% of the total respondents. Majority of them were private limited companies amounting 58 companies. Based on the annual sales report, 60% are small companies while micro and medium companies are 25% and 15% respectively. The majority of the companies are Bumiputera companies with up to 90% of the total respondent. A surprise finding was one is a foreign owned company. The majority of companies are in travel agencies business. Most of the respondent are educated with around 27 has a degree while another seven have postgraduate degree. Table 1 shows the respondents' demographic information for the preliminary study.

Table 1 Respondent's Demographic Information

Demographic	Frequency (n=68)	Percentage (%)
Gender:		
Male	27	39.7
Female	41	60.3
Annual Sales Turnover:		
Less than RM300,000	17	25.0
RM300,000 to <RM3 million	41	60.3
RM3 million < RM 20 million	10	14.7
Ownership Status:		
Bumiputera	61	89.7
Non-Bumiputera	6	8.8
Foreign-owned	1	1.5
Nature of Business:		
Retail Trade/Shopping	1	1.5
Accommodation	3	4.4
Travel Agencies	61	89.7
Transport Services	1	1.5
Others	2	2.9
Education Level:		
SPM/STPM	15	22.1
Diploma	19	27.9
Degree	27	39.7

Postgraduate	7	10.3
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3.2 Reliability and Validity Test

Structural equation modelling was utilised in the data analysis. SmartPLS 3.27 (Hair, Hult, Ringle, & Sarstedt, 2017) was then used to evaluate the reliability and validity of the variables. The validation of a measurement model can be established by examining the indicator loadings, assessing internal consistency reliability, convergent validity and discriminant validity (Hair et al., 2017). For the indicator loading, the value above 0.7 is recommended as it provide acceptable item reliability since they indicate that the construct explains more than 50 percent of the indicator's variance (Sarstedt, Ringle, & Hair, 2017). Meanwhile, composite reliability is generally used to assess internal consistency reliability, where higher value indicate higher reliability (Jöreskog, 1971). Reliability values between 0.6 to 0.7 are considered "acceptable in exploratory research", values 0.70 and 0.90 range from "satisfactory to good". However, reliability value of 0.95 or higher is considered problematic as it indicate the items are redundant and also suggest the possibility of undesirable response patterns that triggered inflated correlation (Hair, Risher, Sarstedt, & Ringle, 2018). Beside composite reliability, Cronbach alpha is another measure of internal consistency reliability.

The next step is to assess the convergent validity of each construct measure. Convergent validity is the extent to which the construct converges in order to explain the variance of its items. The metric used for evaluating a construct's convergent validity, is the average variance extracted (AVE) for all items on each construct. The minimum acceptable AVE is 0.50 or higher, where an AVE of 0.50 or higher indicates that the construct explains 50 percent or more of the variance of the items that make up the construct (Hair et al., 2018). Table 2 shows the composite reliability, convergent validity and loadings.

Table 2 Composite Reliability, Convergent Validity and Loadings

Construct	Items	Loadings	CR	AVE
Intellectual Capital			0.946	0.558
Human Capital	hc1	0.770	0.902	0.650
	hc2	0.903		
	hc3	0.764		
	hc4	0.729		
	hc5	0.852		
Structural Capital	sc1	0.860	0.918	0.692
	sc2	0.790		
	sc3	0.872		
	sc4	0.836		
	sc5	0.797		
Relational Capital	rc1	0.872	0.902	0.699
	rc2	0.906		
	rc3	0.875		
	rc4	0.671		
Corporate Entrepreneurship			0.953	0.632

Innovation	in1	0.799	0.928	0.719
	in2	0.868		
	in3	0.867		
	in4	0.865		
	in5	0.840		
Corporate Venturing	cv1	0.876	0.917	0.787
	cv2	0.915		
	cv3	0.871		
Strategic Renewal	sr1	0.901	0.917	0.737
	sr2	0.915		
	sr3	0.901		
	sr4	0.697		
Firm Performance			0.943	0.704
	fp1	0.847		
	fp2	0.881		
	fp3	0.865		
	fp4	0.933		
	fp5	0.826		
	fp6	0.873		
	Fp7	0.611		

From the table above, the value of composite reliability exceeds 0.8, thus demonstrating internal consistency. Meanwhile, most item loaded more than 0.7, hence demonstrating indicator reliability. However, some item has lower loading ranging from 0.611 to 0.697. Nevertheless, the item loading less than 0.7 but higher than 0.6 are retained as AVE is more than 0.5. Lastly, the AVE value for all construct range from 0.558 to 0.787. Each construct has AVE value of more than 0.5, thus demonstrating convergent validity. The results indicated satisfactory reliability and validity of the measures.

4. Conclusions

This study contributed to the knowledge of entrepreneurship especially in the context of SMEs. Since Malaysia is depending on tourism industry as one of a major contributor for the it's GDP, firms especially the SMEs should identify recognize and utilized their intangible resources and capabilities like intellectual capital and corporate entrepreneurship in order to improve performance. SMEs in tourism industry that able to exploit their intellectual capital and corporate entrepreneurship would be able to offer new products and services, better marketing and promotion, engage in cooperation with others stakeholder in order to perform better. SMEs in tourism industry should leverage their limited internal resources to their advantage. There were few limitations in this study. Firstly, the number of respondents is considered small to derive any conclusion. Secondly, most of the participants are in travel agencies business located in Kuala Lumpur and Selangor. The findings from this preliminary study would allow a more thorough means to examine the effect of intellectual capital and corporate entrepreneurship on the firm performance of SMEs in tourism industry in Malaysia.

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Exploring The Elements of Audience Engagement in Job Advertising of Job Search Website in Malaysia

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Abstract

Recently, Internet or social media has been the popular choice for companies to develop their business strategies. Social media is not used for communication tool or for entertainment only but also plays an important part in marketing strategy as well as a recruiting platform. A job search websites agency has tried various new strategies to drive traffic from Facebook to their job platform. Although Facebook has billions of users, some website advertisements on Facebook are not attractive enough to attract audience engagement. There are many elements in job advertising that have caused the audience whether to engage or not with the ads. Moreover, not many studies have been done on evaluating the elements in job advertising, especially in Malaysia. Therefore, the researchers want to assess the types of audience engagement towards job advertising in Facebook and to explore the elements in job advertising that are able to increase the audience engagement. To gain deep insight about this topic, the researchers conducted an exploratory research where audiences were interviewed about their engagement with the job advertising especially in Facebook. The study revealed that audiences who mostly 'like' the ads will share it with other people. Besides interactive functions, colours and fonts of the ads are also important elements to determine audience engagement.

Keywords: Audience Engagement, Job Advertising, Online Advertising

1. Introduction

Internet has offered us a wide range of opportunities such as connecting us with people from all around the world. The emergence of the Internet that was widely used by the social media especially in creating, sharing, distributing contents, gaining and searching

for information, actually has given some indisputable outcomes. These changes have affected the business model in the industry as well as the use of Internet and social media. Internet and social media were not meant for communication tools or for entertainment only but play an important part in marketing strategy of a company. Marketers and businesses are utilising social media channel as direct communication with their customers (Michaelidou, Siamagka, & Christodoulides, 2011).

This social media trend has opened up new method of engagement and revolutionised the exchange of information. Social media marketing activities are important as it gives the opportunity for companies to stay engaged with customers and access them anytime and anywhere. With more adults between the age of 20-40 (Kaplan & Haenlein, 2010) spending more time on the social media and the Internet, it is good to investigate their preferences towards online advertisement. Rideout, Foehr and Roberts found that young adults spend their time surfing the Internet up to 12 hour a day (2010). Each platform of social media has a different experience that is related to advertising evaluations (Voorveld, Guda, Muntinga & Bonner, 2018).

Engagement with social media advertising is the key to explaining how exactly social media engagement is related to the advertising evaluations. One of the main reasons for company to penetrate into the market is due to the low barriers to entry and its effectiveness in reaching out to the audiences. Companies are also attracted with the low-cost, increasing amount of subscriber, and strong interactivity in social media marketing and then adopting a social media tools in their marketing communication mix (Michaelidou, Siamagka & Christodoulides, 2011). Swani, Milne and Brown (2013) examined the effectiveness of different message strategies on social media (i.e., Facebook) to promote online word-of-mouth activities for Fortune 500 companies and found that “emotional sentiments in Facebook posts is a particularly an effective social media strategy”.

2. Online Job Recruitment

Many online job recruitment agencies such as Qwork, VJob, Maukerja, A job Thing, Internsheep, and Rice bowl (just to name a few), have tried few strategies to increase traffic by spreading their job links. Some of the strategies these company have done are to allow audience to (1) leave a call to action poster at the end of every Facebook post with a job link, (2) replying audience comments and adding job link at the end of the session, (3) posting more than one attractive job every day and (4) increasing interaction with their followers through engagement posts such as personality tests, quizzes, polls, and question and answer sessions.

However, all of these strategies are not good enough to drive traffic to the websites. These have given a bad effect on their performance as a recruitment agency due to low job applications from job advertising on Facebook. With 600K followers, Maukerja has shown less than 500 responses (or likes) on each job posting, A Job Thing has less than 4000 followers, RiceBowl.my accommodates for Chinese and non-Chinese audiences, while Internsheep Facebook with 100K followers has shown less than 100 likes for each post.

Some websites had changed the elements of job advertising by adding an interactive call-to-action that has increased the amount of audience to take action on the job post. Audiences who are interested to apply for the job need to leave a comment and a few

seconds later they will receive an auto-reply message that contains a short instruction and a direct job link that will bring audience to the job vacancy websites.

Due to some of the changes adopted by these websites, the number of new users registered with the account has increased and the same goes with the performance of the Facebook timeline that showed tremendous change of likers and followers. Therefore, this study will show how the researcher is able to find the answer to the changes that happened.

In Malaysia, the trend of online job searching has increased. Therefore, there are a number of companies that provide a platform for of online job search for employers and employees. This study is going to assess the types of audience engagement towards job advertising in social media. The researcher will attempt to find the elements in job advertising of various job search companies used that attract audience to engage.

In summary, there are many elements in job advertising that helps engagement in Facebook and one of it is interactive elements. However, this is not only the elements of it. Thus, the researcher has conducted interview to explore other elements in job advertising websites and identifying what are the main elements that attract audience engagement towards job advertising on Facebook.

3. Methodology

A qualitative study was used because recruitment in social media marketing is a very broad topic and there is a limited time to conduct this study. Thus, data collection was made on a small number of respondents. The interview session was focused on the significant and valid points in order to answering the research questions where approximately 20-30 minutes interview was used with each respondent. The 8 candidates were chosen randomly, and they are followers from various jobs search websites. However, to explore and reach more about their opinions and thoughts of online job advertising, only followers in Facebook will be selected. Facebook has billions of users and therefore it is one of the largest platforms available in the market nowadays.

The questions asked during the interview were to address one of the research objectives of this study such as "What are the actions and respondents when they encounter with new job advertising in Facebook?" "Will you give a 'like' to the job posting?" "Will you share the job posting with others?" The researcher asked for clarification for each answer given by the respondents.

To evaluate the second research objective on exploring the elements in job advertising of job search platform in Facebook, the researcher asked questions such as "What are the elements that attract an audience to take action with the job post?" "Which elements is the main attraction for you to engage?" and "How would colors play an important role in your decision of your action?"

4. Finding Analysis

The respondents for this study consisted of 8 respondents. 6 respondents are female and 2 respondents are male. The respondents' age is between 20-25 with 4 respondents, 26-

30 with 2 respondents and above 30 with 2 respondents. 4 respondents are working with a company and all of them are still searching for better job, 2 respondents are working from home and looking for another job, and 2 respondents are still searching for a job. All of the respondents follow at least one of the online recruitment agency's Facebook.

In terms of respondents' engagement, all respondents would give the job advertisement a 'like' and will tag the name of the person they know who is looking for a job. They will also 'share' and leave comments on the job advertising in their Facebook timeline as well as other social media such as WhatsApp and Viber. A respondent who engages in Facebook has three behaviours of either giving like, comment and share or all (Kim & Yang, 2017). Facebook owners can be categorised into the level of less commitment (those who click on 'like' only) whereas, sharing the info in their timeline is considered as the higher level of commitment. The shared post will appear on the News Feed as well as the user's profile page.

Six respondents, who will 'like' the page, will also share the advertisement in their Facebook timeline. They want others to be informed about the job opening. All six of them set their Facebook as public. Two of the respondents said that they will like the page, but will not share or leave any comments on the Facebook. They would like to keep it from others (in social media) that they are looking for a job. They were concerned if their current employer might see their Facebook timeline and know that they are looking for a job. They preferred to directly message the employer to get more information about the job vacancy. However, they would share the information with their close friends privately especially to the friends who were looking for a job. Besides, they would share the ads via other media than Facebook such as WhatsApp, Viber or Telegram. They believed that it was much safer to privately message others about the job than sharing it on Facebook.

For the second research objective, the researcher found that the information provided in the job advertisement such as detail description of the job, as well as good and simple title, have some influence to the respondents to respond. According to Whiddett, Kandola, & Keenan (2000), the main principle in writing the ads is to give sufficient information about the job so that the suitable candidates will apply but also so that unsuitable candidates will not apply the vacancy. All eight respondents agreed that the information given in the ads do influence their want to respond. Ads with detail description of the job that speaks directly to the potential reader will influence them more.

Some of the criteria that the respondents were looking out for are the attractive job title. A clear job title will grab the reader's attention. Besides that, the respondents also agreed that the ads should also state the minimum salary they offered. This is to avoid the waste of time of replying the ads and then not agree with the salary. Five of the respondents said that they were more attracted to the bold keywords. They would focus more on the bolded keywords and feel the need of the employers to have the post filled.

In this study also, the researcher found that the respondents were more profound to respond to the websites that has more images than the one with less images. All of the respondents claimed that they were more attracted to the ads with colorful image and attracted design.

However, in this study, the researcher found that the use of bright and eye-catching colours used in the website and employer's logo encourages the respondents to engage in it more than the information provided. All respondents also mentioned that the font used also influence them to respond. Larger fonts indicate that the information is important and worth to be read and responded. Pitkanen (2010) found out that company should consider posting the organisation's name and information and also choose carefully the style of writing and the looks of the ads like the usage of colours, pictures, and graphics

Another feature such as, a call-to-action, which asks audience to encourage respondents to leave comments rather than directly message the employer. Leaving comments is one way for respondents to receive direct communication or reply from the employer. Most respondents also stated that they preferred that the job ads give complete yet simple information about the job because the respondents preferred to comment rather than privately message the employer.

Out of all the elements the respondents mentioned, the main element that influences the respondents to react is the job ads with vibrant, bright and eye-catching colours. They claimed that the bright colors such as yellow and red would catch their attention as it brought positive feeling to them. Colours such as bright blue give comforts to the respondents. When asked about the colours that they do not prefer to see in the ads, they chose fade or dark color such black, grey and dark blue because it gives negative emotions to the reader. Valdez and Mehrabian (1994) stated that colors can stimulate, excite, and invoke different emotions. Thus, each colour may result in an alternate psychological response.

5. Conclusion

Based from the research findings, it can be concluded that the audience engagement for job ads on Facebook are similar to various studies done before. As Schivinski, Christodoulides and Dabrowski (2016) have concluded that audiences' engagement levels across Facebook and Twitter can be seen with their consumption ("reactions" / "favorites"), contribution ("comments" / "replies") and creation ("shares" / "retweets") activities.

There is no gap on Facebook used by the respondents to search for jobs vacancy. All respondents engage with the job advertising either via like, comment and share. Audiences in Facebook tend to give a like towards job advertising in social media and it is a good engagement made in a job post.

Other than an interactive call-to-action, the most important factor to increase audience's engagement is the use of vibrant and bright colors in Facebook. They also found out that positive colors (yellow, orange, and red) represent activity and ambition, while negative colors (blue and purple) represent passiveness and obedience (Chang & Lin, 2010).

Therefore, job recruitment agencies or any employers who use online platform to search and advertise job vacancy, ought to consistently use an interactive call-to-action, simple and informative, vibrant and eye-catching colors, company/brand logo and urgency statement into their job advertising. Besides that, other social media platforms such as

Wechat, Pinterest, Google+ and many more that actually have the potential to gain new followers and users because each platform has different types of users and behaviours towards job advertising on social media.

The findings reveal the involvement of the user's response with information content and systems in online job search platform. It shows the significance of what the audience will bring to the experience and what can be done to make the ads better. In the future, the elements of individual cultural values could be included as part of the variables that may be related to explicate respondents behaviour in online advertisement context.

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Fuzzy Simple Hierarchy Analysis for Supplier Selection Decision

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Abstract

Supplier selection problem usually involves so many ambiguity components and multi-criteria factors consideration towards achieving more precision decision. Different researchers have various approaches to overcome such problem concern. In this paper, the Fuzzy Simple Hierarchy Analysis (FSHA) was proposed to deal with the ambiguity or vague multi-criteria evaluation process which commonly exists in supplier selection decision. The technique is equipped with the linguistic variables, the so-called linguistic hedges (i.e., dilation and concentration) for decision-makers (DMs) to evaluate the criterion with ease and direct to the attributes based on their expertise and/or experiences. To show the applicability and practicality of the proposed method, the related hypothetical example was adopted. The calculation results show that the proposed method is highly beneficial and offers a unique advantage to deal with the diversified and too ill-defined in terms of input criterion. Therefore, a simple and systematic manner in evaluation process can be derived from the proposed method without loss any information.

Keywords: Fuzzy Simple Hierarchy Analysis (FSHA); Linguistic Hedge; Supplier Selection.

1. Introduction

Supplier selection is a decision-making process with the purpose of defining an order of preference among potential suppliers based on a set of evaluation criteria (Lima-Junior & Carpinetti, 2016). The process is often an overlooked issue in the procurement process that can possibly touch on effective organizations' performance. Heading into effective

and trusted organizations, companies have to collaborate with outstanding suppliers that offer to provide materials in comparative excellent quality and affordable cost, and this may result in an established long-term partnership between organizations and supplier (Chang, Chang & Wu, 2011). The good cooperation between organization and supplier helps the organization to serve more customer as this can influence the revenue outcome in the long term (Lee, Chuang & Wu, 2013). Therefore, the importance of supplier selection is to determine the high potential supplier that will meet the organizations' needs consistently and helps to ensure the performance of organizations are high (Lin, 2012). Supplier selection can be influenced by a lot of factors or criteria that may help them choose the best options of supplier in order to help the sourcing process. Many criteria for supplier selection were reviewed and synthesized into small number of criteria which suit the characteristics and needs of the business to obtain greater benefits. (Sureeyatanapas et al, 2018). In other cases, some organizations become more dependent on their suppliers, resulted in poor decision making (Chan and Kumar, 2007). Some of the factors that become important in selecting the supplier are the legal, political and cultural process but not excluding the transportation problems, technologies, capacities of the production (Parkouhi & Ghadikolaei, 2017). Thus, in this decision-making process of choosing the best supplier, some criteria are important and need an evaluation.

Some studies propose using weightage on the criteria, and decisions are made based on the weightage given (Chang et al., 2011). Lima-Junior & Carpinetti (2016) suggested the multi-criteria decision making (MCDM), and it should involve the decision makers from various functional areas such as quality, logistics and product development that used to understand the priorities of the buyer company. A lot of studies have been made to identify the best criteria for supplier selection. Even though MCDM method has been applied in various situation and offers well solution, Tarmudi, Abdullah & Md Tap (2010) stated that multi-criteria solutions usually considered only positive aspects and the decision-making process are very critical. In 2012, Lin proposed a FANP which integrates FPP (Fuzzy Preference Programming) with ANP (Analytic Network Process) to identify top suppliers by considering the effects of interdependence among the selection criteria and to handle inconsistent and uncertain judgments. She found that the proposed method can handle effectively the dependence and effects under uncertainty and help firms monitor supplier without any interruption from human decision. A recent study by Abdullah et. al., (2018) was using ANP to weight on the sustainable development criteria. This method is a multi-criteria decision making method where interdependencies amongst many divers' criteria can be dealt with a network. A multi-criteria decision making techniques allow process automation and can bring efficiency and rationality to the decision-making process. Lima-Junior & Carpinetti (2016) developed a new multi-criteria decision making approach based on fuzzy QFD to aid the choice and weighting of criteria to be used in the supplier selection process. The proposed approach combines the fuzzy QFD procedure for weighting the criteria with a procedure for evaluating the difficulty of data collection to describe the criteria in the grid classification. The method helps the decision makers to choose the set of important things yet not so costly criteria to supplier selection.

Igoulalene et al, (2015) proposed two new fuzzy hybrid approaches for the strategic supplier selection problem. The first approach combines the fuzzy consensus-based possibility measure and Technique for Order Preference by Similarity to an Ideal Solution (TOPSIS) method. The second approach combines the fuzzy consensus-based neat

OWA and goal programming model. Both approaches use a CCSD model to compute the criteria weights by using strategic supplier selection problem and analyze the numerical results. They found a priori (TOPSIS) and progressive (GPSF) articulation of the stakeholder's preferences in order to offer satisfactory and legitimate solutions. Moreover, in 2018, Sureeyatanapas et al. extended the ability of TOPSIS method to be applicable even when the assessment data and/or the weight of criteria are uncertain and/or unavailable. This simple method facilitates and simplifies purchasing decisions under incomplete conditions, and it can be generalized to any cases of multiple criteria decision making. This method can be implemented to supplier selection problems and also capable of handling other selection problems. The finding of the research by Parkouhi and Ghadikolaei (2017) agree with Sureeyatanapas, where by using VlseKriterijuska Optimizacija I Komoromisno Resenje (VIKOR) technique, they manage to exploit the grey method to solve vague problems and problems with incomplete information.

However, Banaeian et al. (2018) found that Grey Relational Analysis (GRA) appears to be a preferred method in effectively handling imprecise criteria and supplier alternative data. As mentioned above, they have compared the three performances of the popular MCDM methods including TOPSIS, VIKOR and GRA when integrated with fuzzy sets to address concerns related to decision uncertainties. The result shows that fuzzy GRA has a better time complexity compared to the other two methods and generates the results in smaller number of steps and operations. Meanwhile, Tavana et al. (2016) chose to use a hybrid of ANFIS and ANN method in their research, due to believing it to work more precisely than a previous MLP-ANN method proposed by Golmohammadi. In their research, they used the feed-forward quality of both methods to provide a good predictive framework to make the decision making process in real life much easier. Researches by Chang et al. (2011) and Mirmousa and Dehnavi (2016) used the DEMATEL method to choose the most important criteria in selecting suppliers. However, these previous researches were not without problems. According to a review made by Simic, et al. (2017), some researchers who used DEA as their method encountered a few problems: the users of this method may mistake the input and output criteria, and the judgment of the criteria is subjective. This point is agreed by Parkouhi and Ghadikolaei (2017), who states that the experts who rated the criteria may have their own personal opinions on the matter.

There are a few more methods that can be used in solving supplier selection process. However, in this paper the Fuzzy Simple Hierarchy Analysis (FSHA) was proposed to deal with the vague multi-criteria evaluation process, which commonly exists in supplier selection decision making. To do so, this paper is structured as follows; Section 1 introduces and briefly discusses the literature reviews related to the supplier selection problems. Section 2 was to identify and briefly discuss the common problem facing by DMs in the decision-making process. Sections 3 and 4 both reviewed the theoretical background and methodology, and also the implementation of proposed method for

illustration purposes, respectively. Finally, Section 5 contains the conclusions of this research.

2. Problem Identification

In supplier selection problems, one of the most common problems faced is the ambiguity or uncertainty that exists during the selection process. Many of the past researchers have faced this problem, and they have proposed many techniques to deal with the problem efficiently. However, the proposed techniques are quite complicated to use. In this research, the objective is to propose a simpler method to deal with the ambiguity. The proposed method is by using the Fuzzy Simple Hierarchy Analysis (FSHA) is to be used in the same problem to get the same findings. The method is also improved by equipping it with the linguistic variable approaches, which are the so-called linguistic hedges. The findings are expected to be the same as the previous researches, but with a simpler, systematic and easy to use technique without loss any information.

3. The Theoretical Concept and Methodology

3.1 Preliminaries

In this sub-section, the basic definitions and the theoretical of fuzzy sets and related concept will briefly elaborated and used throughout this paper and for reference purposes.

Definition 1 A fuzzy set A in a universe of discourse X is characterized by a membership function $\mu_A(x)$ that takes the values in the interval of $[0,1]$. It can be denoted as follows:

$$A = \{(\mu_A(x)/x); x \in X\}.$$

Definition 2 A fuzzy numbers A is a fuzzy subset in the universe of a real number R that is both convex and normal.

Definition 3 If $\tilde{A}$ is a fuzzy number and $a_\alpha^l > 0$ for $\alpha \in (0,1]$, then $\tilde{A}$ is called a positive fuzzy number.

Definition 4 A Triangular Fuzzy Number (TFN) $\tilde{A}$ can be defined by a triplet (a_1, a_2, a_3) . The membership function $\mu_{\tilde{A}}(x)$ is defined as:

$$\mu_{\tilde{A}}(x) = \begin{cases} 0, & x < a_1, \\ \frac{x - a_1}{a_2 - a_1}, & a_1 \leq x \leq a_2, \\ \frac{x - a_3}{a_2 - a_3}, & a_2 < x \leq a_3, \\ 0, & x > a_3 \end{cases}$$

Definition 5 Let $\tilde{A} = (a_1, a_2, a_3)$ and $\tilde{B} = (b_1, b_2, b_3)$ be two triangular fuzzy numbers. If $\tilde{A} = \tilde{B}$, then $a_1 = b_1$, $a_2 = b_2$ and $a_3 = b_3$.

Definition 6 A linguistic hedges or a modifier is an operation that modifies the meaning of a term more generally, of a fuzzy set. If $\tilde{A}$ is a fuzzy set then the modifier k generates the (composite) term $\tilde{B} = k(\tilde{A})$.

The modifier defined as

$$\text{Concentration } \mu_{\text{con}(\tilde{A})}(\tilde{A}) = \left[\mu_{\tilde{A}}(a) \right]^\alpha, \text{ where } \alpha > 1 \quad (2)$$

$$\text{Dilation } \mu_{\text{dil}(\tilde{A})}(\tilde{A}) = \left[\mu_{\tilde{A}}(a) \right]^{1/\alpha}, \text{ where } \alpha > 1 \quad (3)$$

Definition 7 The linguistic hedges and their approximate meanings are specifically classified as shown in Table 1.

Table 1 The hedge values of the specific concentration and dilation

Linguistic hedges	<i>Extremely Important (EI)</i>	<i>Very Important (VI)</i>	<i>Fairly important (FI)</i>	<i>Somewhat important (SI)</i>	<i>Less important (LI)</i>	<i>Between linguistic hedges</i>
Meaning	Intensify a fuzzy region	Contrast intensification	-	Contrast diffusion	Dilate a fuzzy region	Intensify/contrast/dilate
Hedge values (α)	$[\mu_{EI}(x)]^3$	$[\mu_{VI}(x)]^2$	$[\mu_{FI}(x)]^1$	$[\mu_{FI}(x)]^{1/2}$	$[\mu_{FI}(x)]^{1/4}$	Between two hedges value range

Source: Cox (1994)

3.2 Fuzzy Simple Hierarchy Analysis-based Linguistic Hedges

In this study the mean of fuzzy numbers which is usually utilized in evaluation process have been ignore totally to representing the crisp values of each criterion. Here, we introduced the advantage of TFNs in linguistic variables to substitute this mean of fuzzy

numbers which is believed more efficient and more representing the actual situations in terms of evaluation approaches. In addition, the linguistic hedge to derive the significant of the relative weights for each criterion has been equipped in the selection process from perspective of group DMs. For instance, the words such as 'extremely recommended', 'very recommended', 'slightly recommended', etc. have been used for rating purposes after the potential suppliers have submitted their quotation. Thus, the words such as 'extremely', 'very', 'slightly' are called linguistic hedges.

3.3 Methodology

To clarify our proposed methodology, the detail step-by-step analysis process was given as follows:

Step 1: Decomposing of actual problem was carried out in the hierarchy structure (see Figure 1) based on the criteria and its definition.

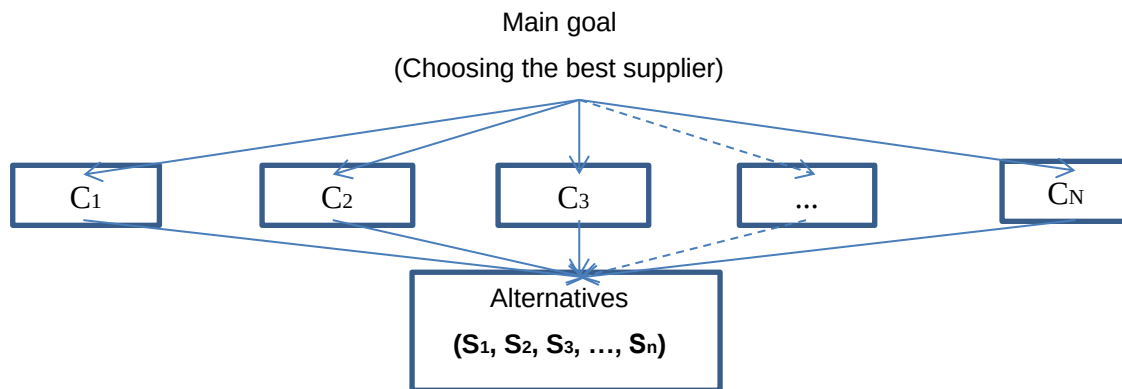


Figure 1 The hierarchy structure of the problem

Table 2 The Triangular Fuzzy Numbers (TFNs) and its linguistic variables, respectively

Linguistic variables	TFNs
Very poor (VP)	(0, 0, 0.1)
Poor (P)	(0, 0.1, 0.3)
Medium poor (MP)	(0.1, 0.3, 0.5)
Fair (F)	(0.3, 0.5, 0.7)
Medium good (MG)	(0.5, 0.7, 0.9)
Good (G)	(0.7, 0.9, 1.0)
Very good (VG)	(0.9, 1.0, 1.0)

Step 2: Assign for each criterion based on DMs evaluation as respect each alternative using TFNs in Table 2. The performance scores ($\tilde{H}$) obtained as

$$\tilde{H} = \begin{matrix} & C_1 & C_2 & \dots & C_n \\ \begin{matrix} S_1 \\ S_2 \\ \dots \\ S_m \end{matrix} & \begin{bmatrix} \tilde{a}_{11} & \tilde{a}_{12} & \dots & \tilde{a}_{1n} \\ \tilde{a}_{21} & \tilde{a}_{22} & \dots & \tilde{a}_{2n} \\ \dots & \dots & \dots & \dots \\ \tilde{a}_{m1} & \tilde{a}_{m2} & \dots & \tilde{a}_{mn} \end{bmatrix} \end{matrix}, \quad (4)$$

where, C_i , ($i = 1, 2, 3, \dots, n$) is number of criterion and S_i ($i = 1, 2, 3, \dots, m$) are number of an alternative (i.e., suppliers)

Step 3: Defuzzyfy ($\tilde{H}_D$) for each vectors (a_{ij}) in fuzzy performance score using Chen (1996) based on TFNs given as

$$\tilde{H}_D = \frac{1}{4} \begin{bmatrix} \tilde{a}_{11} & \tilde{a}_{12} & \dots & \tilde{a}_{1n} \\ \tilde{a}_{21} & \tilde{a}_{22} & \dots & \tilde{a}_{2n} \\ \dots & \dots & \dots & \dots \\ \tilde{a}_{m1} & \tilde{a}_{m2} & \dots & \tilde{a}_{mn} \end{bmatrix}, \quad (5)$$

where

$$(a_{ij})_{m \times n} = \frac{1}{4}(a_1 + a_2 + a_3)_{m \times n} \quad (i = 1, 2, 3, \dots, m; j = 1, 2, 3, \dots, n)$$

Step 4: The power of dilation and/or concentration for each criterion was assigning based on DMs expertise/opinion/suggestions ($\tilde{H}_A^\alpha$) given as

$$\tilde{H}_D^\alpha = \left[\begin{pmatrix} \mu_{11}(a) \\ \mu_{12}(a) \\ \dots \\ \mu_{1n}(a) \end{pmatrix}^{\alpha_1} \begin{pmatrix} \mu_{21}(a) \\ \mu_{22}(a) \\ \dots \\ \mu_{2n}(a) \end{pmatrix}^{\alpha_2} \dots \begin{pmatrix} \mu_{m1}(a) \\ \mu_{m2}(a) \\ \dots \\ \mu_{mn}(a) \end{pmatrix}^{\alpha_m} \right], \quad (6)$$

Step 5: The operator of maximin for overall criteria in descending order was employed to choose the best alternative given as

$$\mu_{H_D^\alpha}(S_i) = \max_i \left(\min_j \mu_{ij}^{\alpha_j} \right) \quad (7)$$

4. Implementation

In this section a case study from Mansini et al. (2012) was adopted. The evaluation was carried out based on six criteria; $C_1 \approx$ quality and technology, $C_2 \approx$ price and cost, $C_3 \approx$ supply time, $C_4 \approx$ service level, $C_5 \approx$ innovation and agility, and $C_6 \approx$ logistics and information. There are five potential suppliers ($S_i, i = 1,2,3,4,5$) have consider in the final stage after initial screening made thoroughly. Next, all four DMs involved evaluate the importance of each criterion based on his/her expertise/opinion (see Table 4). The evaluations are based on the raw input datasets using linguistic variables and quantify by TFNs as define in Table 2.

Table 3 The raw input datasets four six criteria

Alternative/Criteria	C ₁	C ₂	C ₃	C ₄	C ₅	C ₆
S ₁	G	G	VG	G	MG	G
S ₂	G	VG	VG	G	VG	VG
S ₃	VG	G	VG	G	G	G
S ₄	MG	G	VG	G	G	G
S ₅	F	G	G	F	VG	VG

Here, we provide the step-by-step procedures as follows:

Step 1: Decompose the actual problem in the hierarchy structure similar in Figure 1.

Step 2: Assign for each criterion based on DMs evaluation as respect to each criterion.

Here, we obtain the overall performance scores ($\tilde{H}$) using Eq. (4) as,

$$\tilde{H} = \begin{bmatrix} (0.7,0.9,1.0) & (0.7,0.9,1.0) & (0.9,1.0,1.0) & (0.7,0.9,1.0) & (0.5,0.7,0.9) & (0.7,0.9,1.0) \\ (0.7,0.9,1.0) & (0.9,1.0,1.0) & (0.9,1.0,1.0) & (0.7,0.9,1.0) & (0.9,1.0,1.0) & (0.9,1.0,1.0) \\ (0.9,1.0,1.0) & (0.7,0.9,1.0) & (0.9,1.0,1.0) & (0.7,0.9,1.0) & (0.7,0.9,1.0) & (0.7,0.9,1.0) \\ (0.5,0.7,0.9) & (0.7,0.9,1.0) & (0.9,1.0,1.0) & (0.7,0.9,1.0) & (0.7,0.9,1.0) & (0.7,0.9,1.0) \\ (0.3,0.5,0.7) & (0.7,0.9,1.0) & (0.7,0.9,1.0) & (0.3,0.5,0.7) & (0.9,1.0,1.0) & (0.9,1.0,1.0) \end{bmatrix}$$

Step 3: Defuzzyfy ($\tilde{H}_D$) for each vector in above fuzzy performance score matrix using Eq. (5) and obtain as

$$\tilde{H}_D = \begin{bmatrix} (0.875) & (0.875) & (0.975) & (0.875) & (0.700) & (0.875) \\ (0.875) & (0.975) & (0.975) & (0.875) & (0.975) & (0.975) \\ (0.975) & (0.875) & (0.975) & (0.875) & (0.875) & (0.875) \\ (0.700) & (0.875) & (0.975) & (0.875) & (0.875) & (0.875) \\ (0.500) & (0.875) & (0.875) & (0.500) & (0.975) & (0.975) \end{bmatrix}$$

Table 4 The hedges (*dilation and concentration*) from all DMs

DMS	C ₁	C ₂	C ₃	C ₄	C ₅	C ₆
DM ₁	EI	VI	EI	FI	FI	FI
DM ₂	EI	EI	VI	VI	EI	EI
DM ₃	VI	EI	VI	FI	VI	FI
DM ₄	VI	FI	SI	VI	FI	EI

Step 4: Assign the power of concentration and/or dilation for each criterion ($\tilde{H}_A^\alpha$) and aggregate the DMs evaluated values.

Obviously, each of DMs have their own judgment/opinion for each criterion as given in Table 4 and the average aggregated power of *concentration* and *dilation* for each criterion were calculated. Hence, from Eq. (6) we have

$$\begin{aligned} \tilde{H}_D^\alpha &= \begin{bmatrix} \left(\begin{matrix} 0.875 \\ 0.875 \\ 0.975 \\ 0.700 \\ 0.500 \end{matrix} \right)^{5/2} & \left(\begin{matrix} 0.875 \\ 0.975 \\ 0.875 \\ 0.875 \\ 0.875 \end{matrix} \right)^{9/4} & \left(\begin{matrix} 0.975 \\ 0.975 \\ 0.975 \\ 0.975 \\ 0.875 \end{matrix} \right)^{15/8} & \left(\begin{matrix} 0.875 \\ 0.875 \\ 0.875 \\ 0.875 \\ 0.500 \end{matrix} \right)^{3/2} & \left(\begin{matrix} 0.700 \\ 0.975 \\ 0.875 \\ 0.875 \\ 0.975 \end{matrix} \right)^{7/4} & \left(\begin{matrix} 0.875 \\ 0.975 \\ 0.875 \\ 0.875 \\ 0.975 \end{matrix} \right)^2 \end{bmatrix} \\ &= \begin{bmatrix} 0.7162 & 0.7405 & 0.9536 & 0.8185 & 0.5357 & 0.7156 \\ 0.7162 & 0.9446 & 0.9536 & 0.8185 & 0.9567 & 0.9506 \\ 0.9387 & 0.7405 & 0.9536 & 0.8185 & 0.7916 & 0.7656 \\ 0.4100 & 0.7405 & 0.9536 & 0.8185 & 0.7916 & 0.7656 \\ 0.1768 & 0.7405 & 0.7785 & 0.3536 & 0.9567 & 0.9506 \end{bmatrix} \end{aligned}$$

Step 5: Identify the best suppliers and ranked them by descending order using Eq. (7) and we have

$$\mu_{H_D^\alpha}(S_i) = \max(0.5357, 0.7162, 0.7405, 0.4100, 0.1768), \quad i = 1, 2, 3, 4, 5$$

Thus, it shows that $S_1 = 0.5357$, $S_2 = 0.7162$, $S_3 = 0.7405$, $S_4 = 0.4100$, and $S_5 = 0.1768$. Apparently, we can write as $S_3 > S_2 > S_1 > S_4 > S_5$, where S_3 is the best in terms of their overall performance scores compared to other alternatives available. The symbol '>' means 'is superior or preferred to'.

5.0 Conclusion

In this paper we have discussed how the Fuzzy Simple Hierarchy Analysis based on linguistic hedges was employed to choose the best suppliers based on the identified criteria. The method has introduced the linguistic variables based on TFNs approach despite using common mean of fuzzy numbers. This effort is very significant in terms of evaluation approach to derive more efficient and precise results and able to represent the actual decision situations. Besides that, the method also equipped with the power of dilation and concentration for DMs evaluates the importance of each criterion for weighting purposes. Also, it is clearly seen that the proposed method is highly beneficial to avoid the complexity of the evaluation process and in the same time can reduce the time consuming during the analysis stages. Although the case study results may relate only for this numerical example, we can expect the similar outcomes for other real cases. Next, the proposed method has unique advantage in the sense that it can distinguish clearly for every single judgment made by DMs for choosing the best suppliers. Finally, the method also provides a systematic procedure and successful dealing with somewhat ill-defined of input criterion. Thus, it can facilitate the DMs to make decision in a systematic and simple manner. For next effort our study will focus on the possibility to equip the method with the confidence analysis using the α -cut concept. By this tool we believed that the confidence level of DMs can be measured with ease and more effectively. This initiative is left for our future research work.

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Determinants of Customer Satisfaction on Catering Service in Electric Train Service (ETS), Keretapi Tanah Melayu Berhad (KTMB)

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Abstract

In Malaysia, Electrified Train Services (ETS) is the first high speed intercity train system. ETS was executed under the Eighth and Ninth Malaysia Plan with the intention to enhance the operational efficiency and service of Keretapi Tanah Melayu Berhad (KTMB). This service provides an improved travel time for a long-haul journey. As a competitor to other means of public transportation such as airline, this ETS service must be constantly innovative to stay relevant. To maintain and improve this service, the underlying forces that affect customer satisfaction including catering service, needs to be understood. The purpose of this study is to identify the determinants of customer satisfaction on the catering service in ETS of KTMB and among the most common factor discussed are food quality, service quality and atmosphere. 180 questionnaires were distributed to passengers who buy meals at the ETS cabin café and a total of 104 questionnaires were returned. Descriptive analysis was first conducted to examine the demographic characteristics of the respondents. Multiple linear regression analysis was then performed to determine the relationship among variables. The findings of this study clearly show that there were positive relationships between food quality and atmosphere with customers' satisfaction in a surprising manner, no significant relationship between service quality and customers' satisfaction discovered. Among the two significant factors, the food quality has the

strongest influence on customers' satisfaction. Therefore, it is necessary for the ETS catering to continuously understand customers' need especially with regards to food quality. Improving customers' satisfaction will lead to the development of customer relationship, revenue increase and stronger competitive advantage.

Keywords: Catering, Transportation / Railway Catering, Passenger Satisfaction, KTM (ETS).

1. Introduction

The maximization of financial returns is the goal of each profit-oriented organization and as a matter of fact, it is the common benchmark by which business measure success. However, most successful businesses have become acquainted with the idea that money is only the by-product of their actual purpose of existence, which is to create value for their stakeholders and will only follow if this purpose is fulfilled. In addition to that, if the value they provided exceeded the expectation of their stakeholders, they in return could envisage a brighter financial performance ahead since their stakeholders is expected to be satisfied and will return and patronize their product and service offerings.

KTMB strives to provide better service for its customers and in August 2010, it commenced its ETS to provide Malaysian and travelers with different means of inter-city traveling options. This service is better from KTMB's existing traditional train service since it provides improved travel time for a long-haul journey. As a competitor to the other means of public transportation like airline, this ETS service must innovate to stay relevant and in January 2018, KTMB has signed a catering service agreement with Brahim's SATS Food Services Sdn. Bhd., where the latter will render its catering services onboard all ETS operated by KTMB; effective from May 2017. This venture is known as Keretapi Tanah Melayu Catering Service (KTMC).

This new product offering by KTMB is giving its passengers more value and as to maintain and improve this service, the underlying force that affects customers' satisfaction on catering services need to be understood. Food quality, service quality and atmosphere are among the most common factors that contributed to customers' satisfaction. If the business misjudged or failed to recognize these dimensions, satisfaction of their customers is not guaranteed and may threaten the success of its products or services offerings. Linieri (2013) stated that customers' satisfaction is important to a business but achieving satisfaction is complex because it consists of various components, such as expectations or trusts that make a person satisfied. The problem of customers' satisfaction has occurred in other inter-city public transportation service like in the aviation industry (Gebremariam, 2016; Rhoades et. al, 1998; Randall Brandt & Reffett, 1989) and this could be an important point of reference to KTMB to avoid such occurrence from happening to its ETS Cabin Cafe service.

The design and implementation of a strategic based on customers' satisfaction cannot be successful unless the owners determine how customers perceived its products and services. Thus, it is important to understand the factors affecting customers' satisfaction.

Since catering services in ETS is still new, therefore it is a virtually non-existent study. This study is conducted in the hope that some questions pertaining customers' satisfaction pertaining products and services offered by ETS are answered.

2. Customer Satisfaction and its Influencing Factors

Customer satisfaction has the largest effect on customer engagement (Hapsari et al, 2017; Kim & Shan 2015) and relates directly to the customer perception and purchase intention (Edogi, 2017). It is a key element for any service-oriented business (Kabir, 2016). The physical elements of the service and the service convenience are important in determining the overall customer satisfaction (Shahijan et al., 2018; Gebremariam, 2016; Pantouvakis & Lympieropoulos, 2008) and according to Archana & Subha (2012), service quality can be determined as overall consumer's impression of the relative efficiency on the service and the organization. Crews' friendliness, language skill and grooming, as well as personal touch in term of individual attention, kindness, courtesy, and punctuality are part of the service quality mentioned (Namukasa, 2013; Nathanai, 2008; Babbar & Koufteros, 2008).

Besides that, there are several other affecting factors like food quality (Hanaysha, 2016; Al-Tit, 2015; Jooyeon & Soo, 2010; Ryu & Han, 2010) and atmosphere (Hanaysha, 2016; Ahmadpour, 2016; Ali et al, 2015; Mohi, 2012; Jooyeon & Cheong, 2010). Some components like varieties of menu items, proper freshness, taste quality, reasonable temperature, perceived price and appealing presentation are greatly influence the judgement of the customers when evaluating food quality and a consultation with professional chefs is a normality when designing a proper menu (O'Hara & Strugnell, 1997). While the physical surroundings such as the décor, layout, seat comfort and cleanliness that are accompanied with pleasant sound, where the dine-in takes place, will reflects the quality and create favourable emotions for the customer (Keshavarz et al, 2016; Ahmadpour, 2016; Mohi, 2012; Ryu and Han, 2010).

3. Materials and methods

3.1 Sampling and Instrument

The population of this study was the ETS passengers that patron the ETS Cabin Café service. However, there is no database which recorded this population; neither in the past nor in the present time, making it unlikely to obtain an ideal sampling frame for this study. Besides that, the exact number of the population is also indeterminable as it is not precise every time and it is even harder to detect how many passengers have even eaten in the café. As reveal in the schedule of KTMB's traffic statistics, the number of ETS passengers has always increases from the year 2010 to 2016. In this case, it always depends on which errors a researcher wants to consider affecting the results. Thus, the purposive sampling was adopted to be used in this study. According to Rowley (2014), purposive sampling is used when researchers know something about the specific cases and deliberately selects specific ones because they are likely to produce the most valuable data. Thus, the weekend ETS passengers who travel in a long-haul return trip of Kuala Lumpur and Padang Besar and patron the ETS Cabin Café were purposively sampled and a self-reported experience through a questionnaire survey was chosen as the means of data collection. This return trip had been chosen as suggested by the Operation Executive of KTMC, since the trip has the highest number of passengers (320 in total) and

approximately 30-35% of them will use the ETS Cabin Café service. The questionnaire was designed based on all the core constructs stipulated in the study framework and was presented in dual languages (Malay and English). The questionnaires consisted of two parts. Part A was created using a nominal scale to obtain the demographic information of the respondents. For part B, it consists of four (4) sections. Section (A) was used to identify the level of food quality provided by ETS cabin café while section B and C were developed to identify the effect of service quality and atmosphere respectively. Next, section D was designed to determine the overall passenger satisfaction on the catering service provided by ETS.

3.2 Data Collection

The KTMB Corporate Planning Manager and SBU Intercity/ETS Marketing Manager were first contacted with official letter in acquiring permission to undertake the survey in the ETS. A draft survey instrument was also given. Subsequently, after getting the approval from the respective managers, a total of 180 questionnaires were administered and of these 180 questionnaires, 104 responses were obtained. The reliability test was then undertaken for Part B which included Section A, B, C and D, separately. The result showed that the instrument and items used was reliable with coefficient alpha value at 0.903 for Section A, 0.952 for Section B, 0.920 for Section C and 0.913 for Section D.

4. Analyses and Results

4.1 Respondent Profiles

Frequency test revealed most of the respondents were female with 52.90% (n=55) compared to male, 47.10% (n=49). The largest respondents were from two age groups, age 25-34 years and 45 and above, which shared the same amount of percentage and frequency, 25.00% (n=26). Followed by the age group of 35-44 years, 20.20% (n=21), 18-24 years, 17.30% (n=18) and below 18 years, 12.50% (n=13). Most of the respondents were from the income range group of students, no income and retired persons which was 26.90% (n=36). Then followed by below RM3860, 26.90% (n=28), RM3860-RM8319, 25.00% (n=26) and RM8319 and above which was 13.50% (n=14). The respondents who have taken the ETS three times a year or more was 47.10% (n=49) while taken the ETS once or twice per month was 39.40% (n=42). Finally, the respondents taken ETS more than twice per month was 12.50% (n=13).

4.2 Relationship between Factors (Food Quality, Service Quality, Atmosphere) and Customer Satisfaction

Multiple regression was employed to help determine which of the three independent variables (factors) could be used to predict the passenger satisfaction on catering service provided by ETS. The model was significant [$F(3,100) = 113, p < .001$] with the predictors explaining 77% of the variation in the customer satisfaction on catering service in ETS. Among the three predictors, which are Food Quality, Service Quality and Atmosphere, entered into the model, two made statistically contributions to customer satisfaction and that predictors were the Food Quality and Atmosphere with sig. value at .000 and .001 each, when $p < .01$. In terms of importance, Food Quality made the largest unique contribution to the model with $\beta=.573$.

Table 1 Summary of Multiple Regression Analysis

	B	SE B	β
Constant	-.013	1.064	
Food Quality	.436	.056	.573*
Service Quality	.044	.069	.056
Atmosphere	.312	.093	.313*

Note: $R^2 = .772$, $*p < .01$

Based on the Coefficient table, one variable that is service quality was found to be not significant to be included in the model ($0.526 > 0.05$). Therefore, removing this variable could be considered in order to improve the model.

5. Discussion and Conclusion

It is apparent from this study that food quality plays a big role in ensuring customer satisfaction in ETS. This is supported by Ahmad (2015) who concluded that the most significant factors that contribute to a higher level of customer satisfaction is food quality. Key attributes like taste, presentation, temperature, portion size, menu option, price, and value were deemed to be important by the customer for them to patronize any catering services. The customers incline to measure food quality based on these elements (Hanaysha, 2016) and price exclusively was stressed by Ryu & Han (2010) as the major element to be looked at.

Another important insight from this study is that atmosphere did affect the customers' satisfaction and this finding is similar to Hanaysha (2016) who indicated that physical environment has a significant effect on customers' satisfaction. This means that customers who are probably build up a higher degree of satisfaction may have favorable perceptions of the physical environment. Antecedently, Jooyeon & Soo (2010) supported this notion after their study found that atmospheric elements of interior design and layout can highly influence customer contentment. Moreover, as asserted by Ryu and Han (2010), customer satisfaction level increases when the physical environment reflects quality.

Surprisingly, another profound discovery in this ETS Cabin Café study is that service quality has no significant influence on the customers' satisfaction. This unpredicted finding does not support the empirical findings of Shahijan et. al. (2018) and many other past literatures. This is likely to be due to the fact that customers may already have a certain kind of expectation regarding the standard level of service provided by this kind of catering or the service quality is commonly encountered and has no special distinction that it makes the service to be too common.

To conclude, the finding of this study will help to understand better the ongoing discussion of the customers' satisfaction in the mobile catering services and provide a foundation for future researchers and generating the future direction of other similar perspective studies.

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System and Information Quality an Enabler for Assessing ERP Impacts on the Public Sector: The Case of ePBT in Malaysian Local Authorities

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Abstract

The aim of this study is to investigate the impact of the Enterprise Resource Planning (ERP) system on public sector performance in Malaysia using the DeLone and McLean Information System (IS) success model and four perspectives of Balanced Scorecard (BSC) measurement model, financial, customer, internal business, and innovation and learning. This study presents evidence gathered from a questionnaire survey of 52 local authorities (LAs) in Malaysia that have implemented the system. The data was collected by an electronically distributed Google Form questionnaire. The findings indicated that system quality is positive as predicted and significant for all perspectives of BSC. It was also found that information quality is positively related and significant in the customer perspective, and positively related but not significant in financial, internal business, and innovation and learning perspective in Malaysia. The results also ascertained that the implementation of the ERP system in LAs organisations leads to improved performance, proving the suitability of the system vis-à-vis the public sector. The results are expected to encourage other public sector units to adopt a similar strategy in order to gain benefits similar to those enjoyed by LAs.

Keywords: ERP, public sector, local authorities, system quality, information quality, financial, customer improvement.

1. Introduction

Increasing concerns about the performance of the public sector in various developed nations have been linked to the need for an effective system. In a Malaysian context, as reported by Utusan Online (2008) that the majority of local authorities (LAs) which is one

of the public sector components in Malaysia, has failed to report its annual audit in a timely manner. It was reported that only 46% of LA Internal Audit Units nationwide have submitted their audit report annually. The preparation of the annual audit reports of LAs across the country is thus unsatisfactory. This is supported by the Auditor General's Report for 2014 on the audit of activities of the Federal Ministries/Departments and the management of the government companies by the National Audit Department Malaysia, who note that generally there are weaknesses, such as work, procurement, or services not meeting specifications, unreasonable delays, improper payment, wastage, and weaknesses in government assets and financial management. It is thus necessary to improve the quality of standards in the public sector.

The ePBT system is a product of ERP that has been implemented by the government of Malaysia in order to enhance the efficiency and effectiveness of LAs services. The Malaysian government has allocated RM15 million under the 9th Malaysia Plan towards the development of the ePBT system for LAs. In line with this, the objective of this study is to assess the impact of the ERP system on the performance of LAs in Malaysia from four perspectives of Balanced Scorecard (BSC) measurement model, financial, customer, internal business, and innovation and learning. In order to meet this objective, this study explored the following research questions:

- RQ1:** What are the impacts of the ERP system (system quality and information quality) on the performance of LAs in Malaysia from a financial perspective?
- RQ2:** What are the impacts of the ERP system (system quality and information quality) on the performance of LAs in Malaysia from a customer perspective?
- RQ3:** What are the impacts of the ERP system (system quality and information quality) on the performance of LAs in Malaysia from an internal business perspective?
- RQ4:** What are the impacts of the ERP system (system quality and information quality) on the performance of LAs in Malaysia from an innovation and learning perspective?

2. Literature Review and Hypotheses Development

There is a lack of empirical research on the impact of ERP in the public sector especially in Malaysia. In Malaysia, Local Authorities (LAs) are front-line agencies that often deal with people such as developers, traders, investors and the citizens. LAs have a direct impact on the quality of life, such as through roads, traffic lights, licensing, drains and drainage systems, and garbage collection systems. As a result, the services of LAs have always been a benchmark of efficiency and performance of government services. There are three types of LAs: city councils, municipal councils and district councils. In line with the aspirations and the needs of the people, ePBT was developed to strengthen the delivery of LAs via the use of ICT. This is in line with the public service commitment to provide a truly customer-oriented service and deliver solid corporate governance. The Malaysian Administrative Modernisation and Management Planning Unit (MAMPU) and Local Government Department (Jabatan Kerajaan Tempatan) (JKT) implemented a pilot project called ePBT on 1st June 2004.

The ePBT system is seen as a revenue management system encompassing revenue management, accounting, and the reporting of complaints via combined client-server and web concepts. The system helps LAs run their day-to-day operations, especially for

revenue collection and processing financial and accounting transactions. The ePBT system is made up of five systems and 21 major subsystems that are intertwined for the specific purpose of generating statements and reports. Its large capacity has resulted in a complete, stable, and user-friendly application.

2.1 Hypotheses Development

This study included a balanced scorecard (BSC) measurement model based on the IS success model to measure organisational performance. The study adopted the integrated IS success model (Delone and McLean, 2013) and BSC, as per Lin et al. (2006), where they assumed that BSC is correlated with organisational impact. Similar study by Shen et al. (2016) also used BSC for ERP performance measurement. System quality emphasises the performance characteristics of ERP systems, such as ease of use, response time, reliability, and flexibility. Bradley et al. (2006) found that system quality is positively linked to organisational impact and enriched internal coordination among functional areas, which will consequently enhance internal organisational efficiency. The ERP system, with its large degree of flexibility and integration capabilities, also has the potential to help businesses grow (Shang and Seddon, 2002). Thus, the first hypothesis is:

System quality is positively related to financial perspective (H1a), customer perspective (H1b), internal business perspective (H1c) and innovation & learning perspective (H1d).

Information quality focuses on relevance, timeliness, accurateness and the understandability of information produced by an information system. Chen et al. (2012) asserted that the successful implementation of ERP helps enhance the quality of information being generated, which consequently improves the decision-making process. Thus, the second hypothesis is:

Information quality is positively related to financial perspective (H2a), customer perspective (H2b), internal business perspective (H2c) and innovation & learning perspective (H2d).

2.2 Research Method

The sample for this study comprised accountants from each LA in Peninsular Malaysia, currently using the ePBT system. Accountants were selected as the respondents because they are the main users of the ePBT system. Based on the LA website, questionnaires were sent to the head of the accounting department in each LA. Currently, there are 99 LAs in Peninsular Malaysia, which includes nine from the City Council, 33 from the Municipal Council, and 57 from the District Council. The figures were obtained from the Official Portal of the Local Government Department (2015). The data was collected through an electronic survey via a Google Form questionnaire.

3. Results and Discussion

3.1 The Results

Using the LA listings, respondents were selected from all LAs in Peninsular Malaysia. A total of 99 questionnaires were personally emailed to those respondents, and 52.53% (52 questionnaires) were returned, while 47.47% (47 questionnaires) were not returned. The response rate was considered moderate, due to the survey being entirely voluntary. The multiple regression test was adopted to assess the efficacy and effectiveness of the proposed dimensions in explaining organisational performance.

Firstly, on financial perspective. Our statistical analysis shows that the R^2 value is 0.391. This meant that 39.1% of the variance in the financial perspective dependent factor is explained by system quality and information quality. It can be seen from the coefficient test that the t-value shows positive values (system quality = 3.198, information quality = 1.637) which support the correlation results. The p-value for system quality ($p = 0.002$, <0.05) shows a significant relationship from a financial perspective. H1a is accepted, however, the strength of the relationship for the information quality ($p = 0.108$, >0.05) is not significant. Thus, the H2a hypothesis is not accepted. Secondly, on customer perspective, our result shows that the R^2 value is 0.392. This means that 39.2% of the variance in the dependent factor customer perspective was explained by system quality and information quality. It can be seen from the coefficient table that the t-value showed positive values (system quality = 2.743, information quality = 2.153) which supports the correlation results. The research model reached statistical significance of $p=0.008$ for system quality and $p=0.036$ for information quality, meaning both $p<0.05$. Thus, the H1b and H2b hypotheses were accepted. Thirdly on internal business perspective, from the multiple regression analysis carried out, the R^2 value was found to be 0.351. This means that 35.1% of the variance in the dependent factor internal business perspective was explained by system quality and information quality. It can be seen from the coefficient test that the t-value showed positive values (system quality = 3.176, information quality = 1.213) which supports the correlation results. The p-value for system quality ($p = 0.003$, <0.05) shows a significant relationship with internal business perspective, thus H1c is accepted, however, the strength of the relationship for information quality ($p = 0.231$, >0.05) is not significant. Thus, H2c hypothesis is not accepted. Finally, on innovation & learning perspective, our statistical finding shows that the R^2 value is 0.289. This means that 28.9% of the variance in the dependent factor innovation and learning perspective was explained by system quality and information quality. It can be seen from the coefficient test that the t-value showed positive values (system quality = 2.319, information quality = 1.557) which support the correlation results. The p-value for system quality ($p = 0.025$, <0.05) shows a significant relationship with innovation and the learning perspective. H1d is thus accepted, however, the strength of the relationship with information quality ($p = 0.126$, >0.05) is not significant. Thus, H2d hypothesis is not accepted.

3.2 Discussion

The remainder of this section is about the impact of the system and information quality of ERP on the four perspective of BSC, financial, customer, internal business, and innovation and learning perspectives.

RQ1: What are the impacts of the ERP system (system quality and information quality) on the performance of LAs in Malaysia from the financial perspective?

The results indicated that only system quality is significant in the context of the financial perspective. Because ERP technology is expected to result in punctual and accurate enterprise-wide information for decision-making, the documentation and administrative cost of the organisation has been reduced. Since ERP is paperless, LAs could reduce costs by streamlining processing and getting rid of automated clerical duties (Poston and Grabski, 2001). This result is consistent with other studies on the effect of the ERP system on financial performance (de Castro Silva and de Oliveira, 2015, Shohet and Nobili, 2016).

The results regarding information quality are in contrast to prior studies (de Castro Silva and de Oliveira, 2015; Shohet and Nobili, 2016). The information quality result was not significant, but the direction of the result was still as predicted. It is consistent with Poston and Grabski (2001) who pointed out that there is no significant impact from an ERP system on the selling, general, and administrative costs scaled by revenues, and residual income

RQ2 What are the impacts of the ERP system (system quality and information quality) on the performance of LAs in Malaysia from the customer perspective?

In terms of the customer perspective, the results indicated that both system and information qualities are significant. This demonstrated that this system can provide a platform for more interactive customer service, improved service quality through direct customer feedback, and augmented responsiveness to customers, and consequently decrease the number of customer complaints. This is possibly because this system managed to provide accurate, relevant, and timely information to the LA staff, which was able to eliminate delays and errors in filing customer businesses. The results of this study supported prior research showing the impact of ERP implementation on the customer perspective (see Kamhawi, 2008)

RQ3 What are the impacts of the ERP system (system quality and information quality) on the performance of LAs in Malaysia from the internal business perspective?

Only system quality signified positive relationships from an internal business perspective. The quality features of this system, such as reliability, flexibility, fast response time, accurate information, and relevant information, help facilitate and augment the productivity of the staff, which consequently boosts the internal process of the organisation. This is consistent with the findings of ERP researchers, such as de Castro Silva and de Oliveira (2015), Kanellou and Spathis (2013) and Kamhawi (2008). The study found that this system helps improve the quality of generated reports, which is consistent with Chen et al. (2012). The information quality result was not found to be significant in this study, but the direction of the result was still as predicted. In contrast with the findings made by Gorla et al. (2010), the high quality of information, regarding relevance, accuracy, and completeness, does not enable organisations to improve the efficiency and effectiveness of internal business processes. The result is also inconsistent with the studies conducted by Chen et al. (2012) and Kamhawi (2008). The result showed that when the information is not conveyed punctually, or if the information does not meet the needs of the users, it

will weaken the effectiveness of the work processes and consequently affect the internal process of the organisation.

RQ4 What are the impacts of ERP system (system quality and information quality) on the performance of LAs in Malaysia from the innovation and learning perspective?

On the other hand, the results indicated that system quality is positively related to innovation and the learning perspective. It was found that ERP supports organisational growth by helping LAs to be more efficient and effective in delivering services; supports the 'Local Agenda 21', which are strategies set up by the government to boost the performance of the public sector; and helps facilitate the organisational strategy by providing more consistent policies. This is in line with Mirbagheri and Khajavi (2013) and, Shang and Seddon (2002), who found that due to a high degree of flexibility and integration, ERP managed to support business growth. It was also found in this study that the creativity of employees is enhanced by the implementation of ERP, which enables the staff to create new ideas on the job.

4. Conclusions

Applying the DeLone and McLean IS success model and BSC measurement model, the objective of this study was to assess the impact of the ERP system on the performance of PSO in Malaysia from four perspectives, financial, customers, internal business, and innovation and learning. The study found that system quality is positively and significantly related to the financial perspective, customer perspective, internal business perspective, and innovation and learning perspective. This finding implies that a system with a good functional quality from a technical perspective has an excellent impact on organisational performance in the public sector. On the other hand, the study discovered that information quality was positively but not significantly related to financial perspective, internal business perspective, and innovation and learning perspective. Information quality was positively and significantly related to the customer perspective, which indicated that the ERP system managed to provide accurate, relevant, and timely information to the LA staff, who were able to eliminate delays and errors in filing customer businesses. This study analyses the impact of ERP from multiple perspectives instead of focusing only on the traditional aspects of operational or technical impacts. This suggests new guidelines for ERP's adopters, educators, researchers and vendors. There is also a limited number of studies on the impact of ERP, specifically in the Malaysian public sector, and therefore this study provides better understanding, and makes a contribution in the literature regarding the impact of ERP implementation in the context of LAs in the Malaysian public sector.

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Marketing Strategy of Tangerang Culineria as One of the Culinary Tourism Objectives in Tangerang City

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Abstract

Laksa is a traditional food popular in the city of Tangerang and is one of the culinary attractions in the city of Tangerang. Along with the development of the city of Tangerang which is rife with the establishment of the mall, especially the Tang City Mall, which is located quite close to the Laksa district, presents challenges and threats to the existence of a fast food culinary business. With this research, it is hoped that it can produce a marketing strategy in developing the culinarian Laksa of Tangerang so that it can increase the public interest of travel culinary both within and outside the city of Tangerang. It is hoped to increase income for laksa sellers and provide employment opportunities for the people of Tangerang City. This study focused on qualitative research with data collection techniques involving direct observations, in-depth interviews, distributing questionnaires. The data analysis method applied in this study using Matrix analysis of EFAS (External Factor Analysis Summary), matrix of IFAS (Internal Factor Analysis Summary), SWOT Matrix (Strength, Weakness, Opportunity, Threats), QSPM (Quantitative Strategic Planning Matrix).

Keywords: Marketing Strategy, SWOT (Strength Weakness Opportunity Threats), QSPM (Quantitative Strategic Planning Matrix), Culinary Tourism

1. Introduction

The city of Tangerang is a managing city that continues to grow and organize its city. Various public facilities that adorn the city of Tangerang such as playgrounds, sports facilities and tourist attractions is the significance proof of the Tangerang City government to improvise this city. The tourism sector contributes considerably to regional income in the city of Tangerang. In 2017, the number of population in Tangerang municipality was 2,139,891. The global positioning of Tangerang City is 106°36' - 106°42' East Longitude (BT) and 6°6' - 6°13' South Latitude (LS). This area is directly adjacent to Tangerang Regency in the west and north, South Tangerang City in the south, and with the DKI Jakarta Province in the east. The total area of Tangerang City is only 164.55 km² with 19.69 km² being Soekarno Hatta International Airport. With an area of only around 1.59 percent of the total area of Banten Province, Tangerang City is the most important area after South Tangerang City.

A number of macro indicators achieved by the City of Tangerang, including the rate of economic growth in 2017 is 5.88% and estimated at 6.32% in 2019. The economic rate of poor people in 2017 is 4.78% and expected to reduce down to 4.54% by 2019.

The unemployment rate was 7.16% in 2017 and expected to decrease to 6.85% with the increase in the Human Development Index (HDI) to 78.09% in 2019 from 77.36% in 2017.

According to data from the Tangerang City Culture and Tourism Office, the number of tourists visiting this city have increased tremendously, from 362,435 in 2013 to 819,120 in 2017.

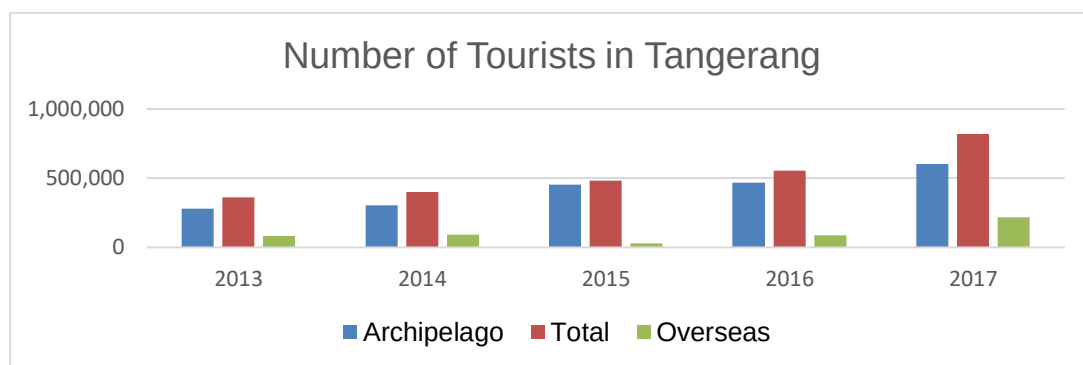


Figure 1 Number of tourists in Tangerang City.

Source: Authorized data from the official website of the Tangerang City government.

In 2013 the number of tourists visiting this region was 362,435. Overseas visitors were 84,617 while 277,818 were tourists within the archipelago. In 2014, total tourist visits amounted to 398,679 from local region tourists at 305,600 while foreign tourists at 93,079. The total tourists in 2015 amounted to 482,903, 454,160 originating from the archipelago and 28,743 came from abroad. The number of visits in 2016 was 554,299, from the archipelago was 469,173 while foreign tourists was 85,126. Finally, in 2017 the total amount of tourists reached 819,120 and 600,312 of them came from the archipelago while foreign tourists at 218,808.

The increase in the number of tourists coming to Tangerang City is an opportunity for culinary ventures including traditional laksa, originating from Tangerang which is one of the culinary delights of the Tangerang City community. The typical Laksa of Tangerang is a yellow turmeric type of noodles or vermicelli made from rice flour with a texture that is rather chewy doused with gravy. The laksa gravy is a blend of coconut milk cooked with green beans, potatoes and chicken broth. This laksa can also be served with round eggs or free-range chicken. Recognizing the potential for laksa culinary, the Tangerang City government provides a special area for the Tangerang Laksa Culinary District located on Babakan Street. In the area, there are seven laksa sellers, each with three assistants to help the business. Along with the development of the city of Tangerang which is rife with the establishment of the mall, especially the Tang City Mall, which is located quite close to the Laksa District, it presents challenges and threats to the existence of a fast food

culinary business. There may be a possibility of shifting original local style food towards western style food, fast food and junk food that is spreading widely in the city of Tangerang, especially in shopping centers such as Tang City, Bale City Mall, and Metropolis Town Square. Therefore, Tangerang Laksa Culinary Marketing Strategy is important in developing the Tangerang City Laksa Culinary Culture so that it can increase the income of the laksa businessmen and increase employment opportunities for the Tangerang community.

2. Literature Review and Theoretical Framework

2.1. Marketing Strategy

According to Olson Jerry (2013) Marketing strategy from the point of view of consumer analysis is a series of stimuli placed in the consumer environment designed to influence affection, cognition, and consumer behavior. This stimulus involves products, brands, packaging, advertisements, coupons, credit cards, price tags, seller communications, and in some cases, sounds (music), fragrances (perfumes), and other sensory instructions.

Gugup Kismono (2012) reveals a Marketing Strategy is a plan to select and analyze target markets, develop, and maintain a marketing mix that can satisfy consumer needs. The steps to develop a marketing strategy generally include strategic planning, selection of target markets, designing a marketing mix, and analyzing the marketing environment.

Based on the concepts above, what is meant by the marketing strategy in this research is a series of stimuli placed in the consumer environment designed to influence affection, cognition, and consumer behavior with steps that include strategy planning, target market selection, marketing mix design, and environmental analysis marketing.

2.2. SWOT

SWOT is an acronym of Strength (Strength), Internal Weakness (Weakness) of a company as well as Opportunities (Threats) and Threat (threats) of the environment it faces (Robinson, 2013). SWOT analysis is a well-known historical technique where managers create a quick overview of the company's strategic situation. This analysis is based on the assumption that an effective strategy is derived from a good "suitability" between the company's internal resources (strengths and weaknesses) and its external situation (opportunities and threats). Good conformity maximizes the company's strengths and opportunities and minimizes weaknesses and threats. If applied accurately, these simple assumptions have good and deep implications for successful designs and strategies.

Strength is a resource or capability that is controlled by or available to a company that makes the company relatively superior compared to its competitors in meeting the needs of the customers it serves. Strength arises from the resources and competencies available to the company.

Weakness (weakness) is a limitation or lack in one or more resources or capabilities of a company relative to its competitors, which becomes an obstacle in meeting customer needs effectively.

Opportunities (opportunities) are the main advantageous situations in the environment of a company. The main trend is one source of opportunity. Identification of market segments that were previously overlooked, changes in competition or regulatory conditions, technological changes, and improved relations with buyers or suppliers can be opportunities for the company.

Threats are the main unfavorable situation in a company's environment. Threats are a major barrier for companies in achieving their current or desired position. Entering new competitors, sluggish market growth, increased bargaining power from major buyers or suppliers, technological change, and its revision or regulatory reform can be a barrier to the success of a company.

According to Rangkuti (2016) explained that SWOT analysis is a systematic identification of various factors to formulate a company's strategy. This analysis is based on logic that can maximize strength (Strengths) and pelpot (Opportunities), but simultaneously can minimize weaknesses (Weakness) and threats (Threats).

2.3. QSPM

According to David in his book Strategic Management Concept and Cases; (2015: 258)¹ The QSPM matrix is used to evaluate and choose the best strategy that best fits the internal and external environment that is owned by a company. Alternative strategies that have the largest total value in the QSPM matrix are the best strategies to be applied to organizations or companies. QSPM analysis is the final analysis used in determining priority choices marketing strategy.

The six steps in preparing the QSPM matrix are as follows:

- a. Make a list of external opportunities / threats and internal key strengths / weaknesses of the company in the left column in QSPM. This information is obtained from the EFAS and IFAS matrices.
- b. Give weights for each of the internal and external factors (the weight given is equal to the weight on the matrix EFAS and IFAS).
- c. Evaluate matrix stage 2 (matching) and identify alternative strategies that must be considered by the organization to be implemented.
- d. Determine the value of attraction (Attractive Scores-AS) is defined as a number that identifies the relative attractiveness of each strategy in each particular alternative.
- e. Calculate the total attractive score (TAS) obtained by multiplying the weight with attractive scores.
- f. Calculate the total sum of the value of attraction. The highest TAS value shows that this strategy is the best strategy to prioritize.

2.3. Culinary Tourism

¹ Fred R. David. Strategic Management Concept and Cases, (England:Pearson Education Limited:2015), 258

The definition of food tourism according to Colin Michael Hall is:

"Food tourism needs are differentiated between tourists who consume food and activities, activities, behaviors and events, destination selection is influenced by interest in food" (Hall, 2003: 9)²

Tourism related to food is a necessity different between tourists where they spend or consume food is part of the travel experience. They are the selection of activities and events, destinations that they do of course it is also influenced by their interest in local food.

Another definition presented by Hall and Mitchell about food tourism are:

"Food and Beverages are the primary motivating factors for travel" (Hall and Mitchell, 2001). a: 308)

Food tourism is defined as a visit to the main destination and supporters of the food industry, food party festivals, restaurants and special locations where to taste food and / or its nature the experience of food produced or regional specialty is a factor the main motivation for traveling.

Edward Inskeep, 1991 says; "The local cuisine reflects the history and culture of the area and can be an attraction for many tourists." It should be made to promote any dishes unique to the area - most tourists enjoy at least trying to local cuisine" (Inskeep, 1991: 286).

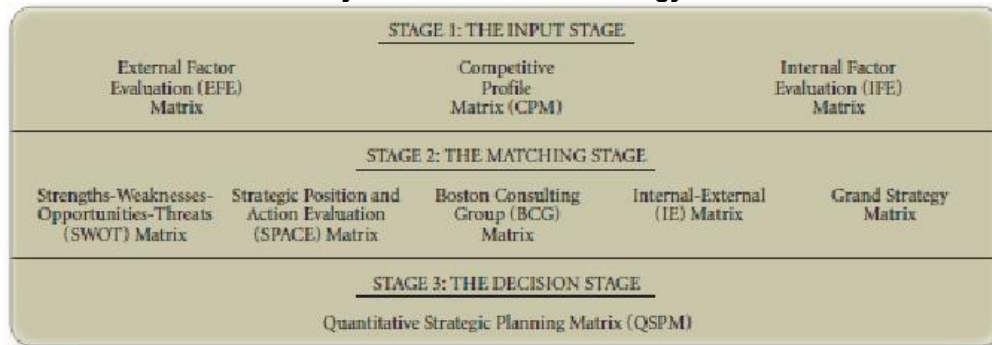
Local cuisine reflects the history and culture of the region and can be used as an attraction for many tourists. In addition, as long as food is of high quality for tourists, trying to promote some unique regional cuisine, most tourists enjoy or at least try local cuisine.

3. Research Methods

The analytical method used in this study is Exploratory / Descriptive, which describes in detail all the weaknesses, strengths, opportunities and threats that exist in the Tangerang City Laksa Culinarian. Based on the problems raised in the researcher used a qualitative approach with the QSPM method. Data collection techniques in this study include observations, interviews, questionnaires, documentation and joint / triangulation.

² Colin Michael Hall. Food Tourism. 2003, 9

Table 1 Analytical Formulation Strategy Framework



Strategic Management Concept and Cases; Fred R. David (2015: 258)³

4. Result

4.1 EFAS (External Factor Analysis Summary)

EFAS matrix analysis is the result of identification of external factors in the form of influential opportunities and threats in Tangerang. The score of the EFAS matrix is 3.63. This figure indicates that Tangerang Laksa Culinary responds well to opportunities and threats in the tourism industry, especially in the culinary field. In other words, being able to take advantage of existing opportunities and minimize potential negative influences from external threats. The highest strength weight score from external strategic factors is 0.82 which is on consumer loyalty.

4.2 MATRIX IFAS (Internal Factor Analysis Summary)

IFAS matrix analysis is the result of identification of internal factors in the form of Strength (Strength) and weakness (Weakness) that influence the Tangerang Laksa Culinary. The results of multiplication between weighting averages and rating ratings will produce a total score. The result of the total weighting score of the IFAS matrix in the table above is 2.67. This figure indicates that Tangerang Laksa Culinary has strong internal capacity and flexibility to carry out various innovations in its internal resources. The strategic factor of the highest internal strength possessed by Tangerang Laksa Culinary is a food product that is popular among the public with a strength score of 1.20. While the highest weighting factor of the weakness factor of 0.32 is in the factor there is no strategy for price promotion that has not been maximized. This can be overcome by conducting promotions and publications about the advantages of laksa culinary at an affordable price to the various levels of society.

³ David. Fred R. Strategic Management Concept and Cases. Fifteenth Edition ". (England. Pearson Education Limited),258

Table 2 External and Internal Factor Analysis Summary Matrix

External Factor Evaluation Matrix (EFE)				
Opportunities		Weight	Rating	Weighted Score
1.	THE CULINARY TOURISM SECTOR THAT IS DEVELOPING AND ASKED	0.10	4	0.40
2.	THERE ARE COMMUNITY ECONOMIC EMPOWERMENTS	0.11	4	0.44
3.	TECHNOLOGY THAT IS DEVELOPING	0.02	4	0.06
4.	RAW MATERIAL SUPPLIER OF FIXED ACTION	0.06	4	0.25
5.	CONSUMER LOYALTY	0.21	4	0.82
TOTALS		1.00		3.63

Internal Factor Evaluation Matrix (IFE)				
Strengths		Weight	Rating	Weighted Score
1.	FOOD PRODUCTS THAT ARE ENJOYED BY COMMUNITIES	0.30	4	1.20
2.	AN AFFORDABLE PRICE	0.09	4	0.36
3.	STRATEGIC LOCATION	0.02	4	0.08
4.	COMFORT AND CLEANLINESS PLACE	0.03	4	0.12
5.	FRIENDLY AND BROUGHT WAITER	0.05	4	0.20
TOTALS		1.00		2.67

Weaknesses				
		Weight	Rating	Weighted Score
1.	THERE IS A FAST RESTAURANT AROUND THE LOCATION	0.04	2	0.08
2.	THERE IS NO PRICE PROMOTION STRATEGY	0.16	2	0.32
3.	NOT HAVE A HALAL CERTIFICATE	0.02	1	0.02
4.	EQUIPMENT AND COOKING EQUIPMENT ARE SIMPLE	0.02	1	0.02
5.	PROMOTION IS NOT MAXIMUM	0.27	1	0.27
TOTALS		1.00		2.67

4.3 SWOT Analysis

SWOT analysis diagram based on IFAS and EFAS matrix scores to determine the position of Tangerang Laksa Culinary. Based on the results of IFAS and EFAS matrix scores obtained: X axis coordinates = Strength score - Weakness score ($1.96 - 0.71 = 1.25$). Y axis coordinate = Opportunities score - Threats score ($1.97 - 1.66 = 0.31$). So the Tangerang Laksa Culinary coordinates on the SWOT analysis diagram are (1.25, 0.31).

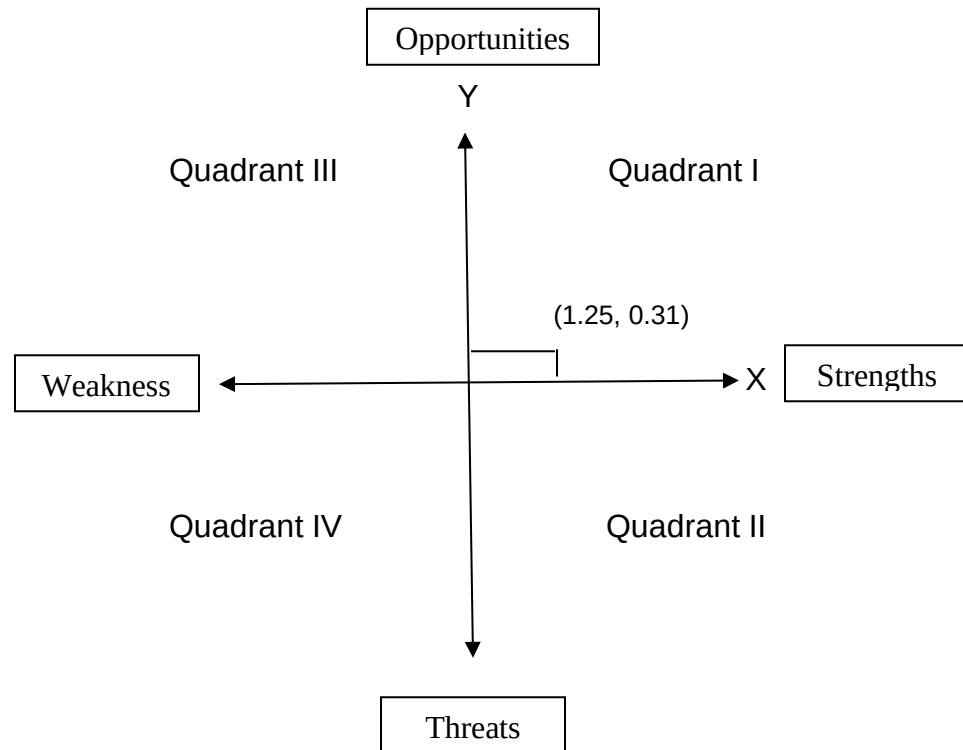


Figure 2 SWOT Analysis Matrix

The SWOT analysis diagram shows the position of Tangerang Laksa Culinary in Quadrant I, this is a very favorable situation, because it has opportunities and strength so that it can take advantage of opportunities. The strategy that must be applied in this condition is to support aggressive growth policies (Growth oriented strategy)

4.4. Internal External Matrix (IE)

The IE matrix is based on two key dimensions, namely the total IFAS values weighted on the X-axis and the total EFAS values weighted on the Y-axis. In the IE matrix X-axis, the total IFAS value obtained is 2.67 so that it is considered to be moderate. Whereas on the Y-axis, the total EFAS value obtained is 3.63. IE matrices obtained enter into the IV cell division called Hold and Maintain Intensive strategies (market penetration, market development, and product development) or integrated (backward integration, forward integration, and horizontal integration), so alternative strategies can be determined in the following picture:

Table 3 The Total Internal External Matrix

The Total IFE Weighted Scores

<i>Strong</i> 4.0 to 3.0	<i>Average</i> 2.99 to 2.0	<i>Weak</i> 1.99 to 1.0
I	II	III
IV	V	VI
VII	VIII	IX

4.5 QSPM Matrix

Based on EFAS matrix analysis, IFAS Matrix, SWOT Matrix and IE matrix, which composes phase 2, several alternative strategies will be selected, namely Market Development Strategy and Product Development Strategy. Next, the selection of priority strategies is carried out by tabulating the priority of the strategy and then selected with Total Attractiveness Score 7.60 is the Product Development Strategy. This means that the most suitable marketing strategy to be applied in Laksa Culinary is product development. Kotler and Armstrong (1996) say that product development is a strategy for the growth of a company by offering new or modified products to the current market segment. What can be done by laksa sellers in the Laksa district is trying to increase market share for products or services that are now available through better marketing efforts. For example by increasing the number of marketing personnel, increasing spending on advertising costs. In the scope of marketing management includes activities of 4P and 3P (Product, Price, Place, Promotion) + (People, Process, Physical Evidence).

Table 4 Market Development Strategy and Product Development Strategy

			PRODUCT DEVELOPMENT		MARKET DEVELOPMENT	
N	Opportunities	Weight	AS	TAS	AS	TAS
1.	The culinary tourism sector that is developing and in demand.	0.10	4	0.4	3	0.30
2.	There are community economic empowerments.	0.11	3	0.33	2	0.22
3.	Technology that is developing.	0.02	2	0.33	3	0.05
4.	Raw material supplier of fixed action.	0.06	4	0.25	1	0.06

5.	Consumer loyalty.	0.21	4	0.82	3	0.62
	Threats	Weight	AS	TAS	AS	TAS
1.	Government policy on tourism is less conducive.	0.04	2	0.07	2	0.07
2.	Existing competitions and various promotions.	0.14	4	0.54	4	0.54
3.	Many fast food restaurants.	0.02	2	0.05	2	0.05
4.	Consumer services highly on demand.	0.06	4	0.24	2	0.12
5.	Increasing food ingredients, electricity rates and other life costs can reduce tourism interest.	0.25	4	1.00	2	0.50
	Strengths	Weight	AS	TAS	AS	TAS
1.	Food products that are enjoyed by communities.	0.30	4	0.20	4	0.14
2.	An affordable price.	0.09	4	0.36	4	0.16
3.	Strategic location.	0.02	4	0.08	2	0.31
4.	Comfortable and cleanliness place.	0.03	4	0.12	2	0.21
5.	Warm and Friendly waiter.	0.05	3	0.15	2	0.36
	Weaknesses	Weight	AS	TAS	AS	TAS
1.	There is a fast food restaurant around the location.	0.04	3	0.12	2	0.44
2.	There is no price promotion strategy.	0.16	4	0.64	3	0.16
3.	No Halal Certificate.	0.02	2	0.04	2	0.22
4.	Cooking equipment is simple.	0.02	4	0.08	4	0.30
5.	Promotion is not maximum.	0.27	4	1.08	4	0.48
TOTALS				7.60		6.04

5. Conclusions

Based on the EFAS matrix analysis, IFAS Matrix, IE Matrix, and SWOT Matrix that compose phase 2 obtained several alternative strategies to be chosen, namely Market Development Strategy and Product Development Strategy. Next, the selection of priority strategies is carried out by tabulating the priority of the strategy and then selected with Total Attractiveness Score 7.60 is the Product Development Strategy. Some of the strategic steps that can be done by the Laksa Culinary Professionals are as follows:

- Implementing a responsive strategy that is done by accommodating the wishes of consumers.
- The development of new products begins with the creation of ideas that are finding and developing new product ideas from various sources. Many new product ideas come from internal sources by conducting official research and development, choosing ideas from their employees, and exchanging ideas. The idea that come from

external sources is by conducting surveys and focus groups as well as analyzing customers' questions and complaints, so they can produce new product ideas that will meet the specific needs of consumers.

- c. Promotion is one effective way to introduce Tangerang Laksa products to the public as well as online promotion. The right promotion strategy and the right target will make the Laksa Tangerang products offered more and more popular among the public.
- d. Improve the quality of HR, because Human Resources (HR) is important in a culinary business. Increase the quality of human resources to employees and staffs while maintaining excellent hospitality towards consumers.

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An Overview of a Broadly-based Entrepreneurial Competencies Model for Business Success of Women Micro-entrepreneurs in Malaysia

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Abstract

Women comprise half of the Malaysian population or 15.3 million from a total of 31.7 million people. Approximately, 88 percent of women entrepreneurs in the country are involved in micro-entrepreneurs. Women micro-entrepreneurs contribute significantly through income generation and job creation. Despite the significant proportion and pivotal roles of women micro-entrepreneurs for economic development, their business success is still debatable. The number of successful women micro-entrepreneurs is still low, and they are underperforming despite the increase in their population. Thus, this paper seeks to develop a broadly-based entrepreneurial competencies model that is exclusively and mutually for women micro-entrepreneurs to succeed in their business by investigating each domain of entrepreneurial competencies. This was done based on the findings by reviewing a thorough review of literature from the local and global context about this issue. Previous studies revealed that women micro-entrepreneurs need to have necessary entrepreneurial competencies to act as a catalyst for their business success. The women micro-entrepreneurs need to have eight domains of entrepreneurial competencies which comprise of (a) strategic (b) commitment (c) conceptual (d) opportunity (e) organizing and leading (f) relationships (g) personal, and (h) technical competencies that are exclusively and mutually for women micro-entrepreneurs' business success. Finally, the conclusion from the literature helps to assess the critical issues of the low number of successful women micro-entrepreneurship, and they are underperforming in Malaysia. Furthermore, understanding on every domain of entrepreneurial competencies for women micro-entrepreneurs would also ascertain which of these competencies are to be included in the entrepreneurial competencies model for women micro-entrepreneurs.

Keywords: Women micro-entrepreneurs, business success, entrepreneurial competencies

1. Introduction

In the new global economy, business success has become a central issue for women micro-entrepreneurs in developing nations, including Malaysia. Woman micro-entrepreneur is a woman or women partners who establish, manage, and operate a micro-

enterprise. Business enterprises owned by women entrepreneurs accounted for 186,930 firms, or about 20.6 percent of total business establishments in Malaysia (Department of Statistics, 2016). About 88 percent of the entire women entrepreneurs in this country are women micro-entrepreneurs (Ming-Yen Teoh & Choy Chong, 2014; Al Mamun et al., 2016). These data showed that woman micro-entrepreneurs play a vital role in the national economy. The women micro-entrepreneurs are the key developers of micro-enterprises, and these businesses are critical drivers of economic development (Paoloni & Dumay, 2015). Women micro-entrepreneurs play a pivotal role in achieving Malaysia's vision of becoming a well-developed country with a fully competitive, dynamic, and robust economy (Hassan, Mahdee, Rahman, & Sade, 2017). Nonetheless, the number of successful women micro-entrepreneurs is still low, and they are underperforming despite the increase in their population (e.g Hoe, Isa, Hin, Hashim, Yunus, & Abdullah, 2012; Mutalib, Arshad, Ismail & Ahmad, 2015; Mustapha, 2016; Rani & Hashim, 2017).

A considerable amount of literature has acknowledged business success is heavily dependent on entrepreneurial competencies of the Malaysian entrepreneurs (Ahmad, Halim, & Zainal, 2010; Ng & Kee, 2013; Tehseen & Ramayah, 2015). Also, Ahmad, Ramayah, Wilson, and Kummerow (2010) posited that understanding business success from the perspective of entrepreneurial competencies is essential as it provides entrepreneurs with skills on how they should run their business and motivates them to be aware of the expected outcomes of their behavior.

Hence, this paper seeks to develop a broadly-based entrepreneurial competencies model that is exclusively and mutually for women micro-entrepreneurs to succeed in their business by investigating each domain of entrepreneurial competencies. Even though the effect of entrepreneurial competencies may have been explored to a certain extent, this paper intends to provide an integrated account of contributions relating to entrepreneurial competencies in the context of women micro-entrepreneurs.

The results will add to the increased effectiveness of women micro-entrepreneurs in developing nations, particularly in Malaysia. Besides, they can also provide more clarity on the priorities of determining predominant types of competencies among women micro-entrepreneurs for further development.

2. Literature Review

Based on literature and as a strategic exploration, this study intends to develop a clear understanding of the relationship between every domain of entrepreneurial competencies with business success among women micro-entrepreneurs in developing nations like Malaysia.

Women micro-entrepreneurs are setting up their business mainly to achieve success (Mwaniki, Nassiuma & Maket, 2018). Generally, business success is associated with the goal and objective achievement from any viewpoint it is considered (Pasanen, 2003). According to Rashid, Ngah, Mohamed & Mansor (2015), women micro-entrepreneurs mainly defined business success from economic outcomes alone since they sought entrepreneurship as a way to gain income, empower themselves, and relieve the burden of gender. Thus, business success is the ability of women micro-entrepreneurs to meet their business goals in terms of economic perspectives. Business success enhances

household incomes through profit generation, thereby increasing employment and bringing economic and social stability.

Lazer & Paul (2015) place entrepreneurial competencies as the underlying characteristics possessed by individuals, which assist them to execute the tasks in a most befitting manner. According to Zainol, Al Mamun, Ahmad & Simpong (2018), entrepreneurial competencies are a strong predictor for business success. Such competencies constitute the components of individual characteristics including knowledge, skills, abilities, behaviours, and attitudes that impact on the abilities of the women micro-entrepreneurs to perform the activities of the business most effectively towards success. Women micro-entrepreneurs need an essential mix of competencies that are suitable for the demand of tasks to boost their business success.

The domains of entrepreneurial competencies proposed have been adopted on the basis from previous studies which show that they may impact either directly or indirectly towards business success. The broadly-based entrepreneurial competencies which are mutually and exclusively applicable for women micro-entrepreneurs comprise of eight domains, namely strategic, commitment, conceptual, opportunity, organizing and leading, relationship, personal, and technical competencies.

Strategic competency is defined as setting, evaluating, and implementing strategies by the women micro-entrepreneurs and having abilities and skills from a broader and long-term perspective. The strategy explains how the organizations deploy resources among units; thus, the engagement of this competency will contribute mainly to business success (Hussin, Rabun & Yunus, 2012). With strategic competency in place, women micro-entrepreneurs will be able to make decisions tailored to the dynamics of a specific situation, broader and long-term perspective to succeed in their business.

Commitment competency is about diligent women micro-entrepreneurs with a restless attitude towards their business. This competency reflects the ability to strive in achieving long-term goals with intense devotion, taking initiatives, and possessing the entrepreneurial attitude (Zainol & Al Mamun, 2018). The competent women micro-entrepreneurs can find a niche to enter the market even the market is saturated, and they can still keep a positive attitude about the situation to find an alternative.

Conceptual competency reflected in the women micro-entrepreneurs' behaviours when analyzing the problems, making important decisions, and innovating in new processes, products, or new services. Zainol & Al Mamun (2018) referred to conceptual competency as the ability in making decisions automatically about business opportunities or absorbing and comprehending complex information for business success. Unlike strategic competency, this conceptual competency is a concern with a short-term perspective, resolving instant events, or requiring fast responses.

Opportunity competency related to recognizing market opportunities through various means and forms from the competitive scope of the business (Al Mamun, Muniady, Ibrahim & Nawi, 2018). This opportunity competency is essential for women micro-entrepreneurs as they will alert of the current situation in the market to seek business information actively, evaluate the risk involved, and transform it into a business opportunity.

Competency in organizing and leading refers to an ability to plan, organize, lead, motivate, delegate, and control (Suhaimi, Al Mamun, Zainol & Nawawi, 2018). The competency is essential among women micro-entrepreneurs in executing their daily duties that incorporate planning of daily operations, acquiring and allocating resources from both external and internal, leading and motivating employees, and delegating and establishing rules and regulations for the business.

Relationship competency refers to the ability to build and keep networks and relationships with both existing and potential stakeholders (Al Mamun, Muniady, Ibrahim & Nawawi, 2018). This competency is essential to the women micro-entrepreneurs as they interact with numerous categories of stakeholders such as customers, suppliers, employees, government authorities, competitors, and others while doing business. Women micro-entrepreneurs will be able to develop long term relationship and maintain the trust with other stakeholders to acquire and strengthen their resources and skills for business success.

Personal competency refers to characteristics that help in the building up of personal strength and to improve effectiveness in performing specific challenging tasks (Al Mamun, Nawawi, & Zainol, 2016). The women micro-entrepreneurs need to have the personal competency to enable them for self-management by identifying their strengths and weaknesses and match them with opportunities to ensure business success.

Technical competency involves processing knowledge of instruments and the functioning of tools, machines, and mastery of tasks or content of work. It covers the field of specialized knowledge and practical skills but does not include any personal qualities (Kozak & Mokan 2018). This technical competency is significant for women micro-entrepreneurs in handling relevant tools to ensure the smooth running of their business operations.

3. Conclusion and the way forward

This present paper endeavours to develop a broad-based model of entrepreneurial competencies which are exclusively and mutually for women micro-entrepreneurs in developing nations such as Malaysia, to succeed in their business. It is imperative to note that traditional roles are becoming less frequent in the array of entrepreneurial careers. As a result, additional competencies are required for women micro-entrepreneurs. It is possible that failure to recognize the broader entrepreneurial competencies that exclusively and mutually for women micro-entrepreneurs may have compromised the capacity to predict business success for women micro-entrepreneurs. Therefore, it is crucial for a comprehensive analysis of entrepreneurial competencies by encompassing the total range of competencies necessary for effective performance. Future research may conduct an empirical study to examine the relationship between every domain of entrepreneurial competencies and business success.

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Factors Influencing Audit Report Lag in Malaysian Public Listed Companies

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Abstract

Timeliness of audited financial statement is significantly influenced by the length of the audit process. The purposes of this study is to identify the level of audit report lag (ARL) in Malaysian public listed companies and to investigate the factors that influence ARL in Malaysia. This study extends the previous studies by using the sample of 725 public listed companies in Bursa Malaysia for the year 2017. Secondary data from the companies' annual reports were used in this study. The results show that 97.7% (708 out of 725) of public listed companies complied with Bursa Malaysia requirements to have audited financial statement prepared within 4 months; hence on 17 (2.3%) companies did not comply. Meanwhile, the average number of days taken by companies to issue their audited financial statement is between 95 to 96 days. The results also indicate that there is a significant relationship between audit tenure, audit firm reputation and ARL. However, there is no significant association between type of industry and ARL. Findings from this study would contribute to practitioners and relevant regulatory bodies such as Bursa Malaysia, Malaysian Institute of Accountants in ensuring that ARL can be reduced or minimised.

Keywords: Audit Report Lag (ARL), Timeliness, Public Listed Companies, Malaysia.

1. Introduction

The purpose of auditing a financial statement is to add credibility to the reported financial position and performance of a business. Bursa Malaysia requires all Public Listed

Companies (PLCs) to disclose audited financial statement within 4 months after the companies' financial year-end (Bursa Malaysia Listing Requirements, 2018). The timeliness of audited financial statement being released to the market is very important to the company and to the stakeholders. This is because stakeholders often rely on the audited financial statement in making their decision.

It was argued that the timeliness of audited financial statement released to stakeholders might influence the level of uncertainty in decision-making. Chambers and Penman (1984) stated that market behaviours would move according to the performance of the client company, thus the timeliness of accurate financial information is important. For example, Chambers and Penman (1984) found that investors perceived that firms not reporting on time to be a signal of bad news, while firms that released their financial reports later than expected time received negative perceptions or views. Prior literature suggests that there are several major factors that affect the timeliness of audited financial statements. Therefore, the purpose of this study is to identify the factors that influence the timeliness of issuing the audited financial statement by the Malaysian PLCs. The delay in issuing the report after the stipulated time frame is known as audit report lag (ARL). The findings from this study are hoped to provide new evidence on the factors that affect the ARL in Malaysian business environment.

2. Problem Statement

ARL is identified as a gap between a company's financial year-end date and the signing date of the audit report. It is important to enhance the knowledge regarding factors affecting ARL as the number of PLCs in Bursa Malaysia keeps increasing year by year (Wan Ali, 2008). It is argued that, the shorter the time between a company's financial year-end and the issuance date of financial statement, there will be a greater chance for the users such as investors to gain benefits from the financial statement (Dao & Pham, 2014). Investors usually gather the company's information from various sources, including the audit report. Hence, the timeliness of accounting information is important to build the confidence level among investors towards the capital market (Ettredge, Li & Sun, 2006). However, when there is a delay in getting the audit report, known as ARL, the values of audit report become less and less relevant for investors to make decisions.

Meanwhile, based on the study carried out by Khasharmeh and Aljifri (2010), the lag in publishing the audited financial statement will increase the level of ambiguity regarding the decisions made based on the information obtained from the financial statement. Findings from study conducted by Habib and Bhuiyan (2011) revealed that the shorter the ARL, there will be a greater chance for the users to gain benefits from the financial statement.

On another note, it is crucial to understand the factors that contribute to ARL since these factors affect the timeliness of issuing company's annual report. Referring to Chambers and Penman's (1984) study, timeliness can be defined as the reporting delay from the company's accounting year-end to the date of the audit report completed. Thus, the time taken to publish annual report depends partly on time taken for auditors to sign the audit report. This is important in order to preserve its efficient functioning and long-term economic and social benefits.

According to Bursa Malaysia Listing Requirements (2018), a listed issuer must issue its annual report that includes annual audited financial statements together with the auditors and directors' reports of the listed issuer, to the Exchange and shareholders within four months from the close of the financial year of the listed issuer. Due to the nature of auditing process, previous empirical studies argued that there is a huge gap between the closing date of the companies' balance sheet and the date of the issuance auditor's report (Amr Nazieh, 2015). Audit delay can give negative impacts to companies if an audited financial statement is not submitted within the stipulated timeframe, that is, four months. This is because accounting information becomes less relevant as time passed (Atiase, Bamber & Tse, 1989).

This present study, therefore, is crucial in order to reduce the increasing damages within PLCs in Malaysia. This is because timely issuance of audited financial statement is important to ensure ARL is eliminated or minimised. Various efforts have been made by the professionals and regulatory bodies to identify factors that restrain companies from deferring the submission of financial report. Hence, the aim of this study is to investigate the factors that contribute to the ARL in Malaysian PLCs. Specifically, another objective of the study is to identify any relationship between the factors that influences the ARL and the level of ARL in Malaysian PLCs.

3. Literature Review

This section contains the literature review on the definition of audit report lag (ARL) and the occurrence of ARL across the globe and in Malaysia.

3.1 Definition of Audit Report Lag

Empirical research by Davies and Whittred (1980), Dyer & McHugh (1975) stated that ARL is the time in days that lapses between the company's financial year-end and the date of signing the audit report. According to Blankley, Hurtt, and Mac (2015); Ashton, Willingham, and Elliot (1987), ARL is examined lag or delay on the number of days from financial year-end to audit report date. Other studies such as Newton and Ashton (1989), Carslaw and Kaplan (1991), Bamber, Bamber and Schoderbek (1993) and Lawrence & Glover (1998) defined ARL as the number of days between the date of the financial statement and the date of the auditor's report.

The period of ARL in this study reflects the audit work from the company's financial year-end to the audit report date. Audit delay severely affects the quality of financial reporting by not providing timely information to investors. Section 169 of the Companies Act 1965 requires the directors of every company to lay before the company at its annual general meeting audited financial statements that give a true and fair view of the state of affairs of the company and its results for the period under audit (William, 2007). Thus, the appropriate date for the report is when the auditor has completed the most important auditing procedures in the field. This date is important to users because it indicates the last day of the auditor's responsibility for the review of significant events that occurred after the date of the financial statements.

3.2 Audit Report Lag Globally and Malaysia

Several studies have been conducted to examine ARL or audit delays for companies in the developed countries, such as the US, Canada, Australia, New Zealand and United Kingdom. Earlier studies examined the impact of selected company characteristics on ARL using univariate tests. Company size was found to be negatively associated with ARL (e.g. Courtis, 1976; Davis & Whittred, 1980). Courtis (1976) also reported that financial companies had comparatively shorter audit delays. Garsombke (1981) detected audit delays for US companies using January through March as year-end. Meanwhile, Whittred's (1980) study found that companies receiving qualified audit opinions were associated with longer audit delays in Australia.

Previous studies also show that a ARL is a worldwide issue that financially important. These researches were mostly using US information. For example, Asthon (1989); Bamber (1993); Schwartz & Soo (1996) & Lee (2009). There were also researches conducted outside USA such as Egypt (Afify, 2009), New Zealand (Habib & Bhujan, 2011), Bahrain (Al-Ajmi, 2008) and Jordan (Alkhatib & Marji, 2012). However, from the review of literature, the research on audit report lag using Malaysia data sets are limited.

Despite not many research being conducted in Malaysia, the issue of ARL still exists in Malaysia which are caused by many factors. Previous studies by Abdul-Rahman and Mohamed-Ali (2006), Bradbury, Mak and Tan (2006) and Abdullah, Nor Zalina and Mohamad Naimi Mohamad (2010) have shown that factors such as earnings management or re-establishment in Malaysia is not related to the CEO acting as Chairperson. This is because it shows that the prediction of roles separation between the CEO and chairperson will improve the quality of financial reporting and minimise audit lag.

Previous researches (Walker & Johnson 1996, Che-Ahmad & Houghton 1996 & Taylor 1997) extend Che Ahmad and Abidin's (2008) study by examining audit delay in a developing country. Thus, Malaysia can be categorised as such a country that provides higher setting for audit market research. In addition, it desires to provide actual evidence regarding audit delay of Malaysian public listed companies. The outcome of these studies show that the mean duration of audit delays of Malaysian companies much longer than the delays in Western countries. Hence, the main purpose of this present study is to provide evidence regarding ARL of Malaysian PLCs. Specifically, this study investigates further on the factors that could influence the audit report lag and level of ARL in Malaysia.

Meanwhile, various factors such as company size, type of industry, audit tenure, audit firm reputation, Board independence, duality role of CEO, and existence of audit committee have been considered in the previous research as determinants of ARL. For the purpose of this study, only three factors would be considered that influence the ARL, namely type of industry, audit tenure and audit firm reputation.

4. Research Methodology

The population frame for this study consists of 774 PLCs in Main Market of Bursa Malaysia as at 30th September 2018, covering 13 industries. However, for the purpose of this study, there were only 725 listed companies used as the sample. This study excluded companies

from the financial services and real estate investment trust industries due to their nature of business and governed under different rules and regulations (Shafie et al., 2010).

This study also used secondary data because the data required to measure the variables are available and accessible from the companies' financial reports through Bursa Malaysia's website. The data for this study were extracted from the company's annual report for year 2017. Year 2017 was chosen because it is the latest data available for most of the listed companies in the selected year for the purpose of measuring the audit report lag. The data gathered also is to determine the relationship between the dependent variable and independent variable of the study. In measuring the variables, ARL was measured by calculating number of days between the company's financial year end and audit report date. For type of industry, 11 industries were compared and tested to determine the level of ARL. For audit tenure, the samples were classified into short, medium and long audit tenure. As for the third independent variable, which is audit firm reputation, it is divided into two groups, Big Four and Non-Big Four audit companies. The correlation analysis was applied to measure the relationship between the dependent variable and independent variables used in this study. Since the data were not normally distributed, then Spearman method was used.

5. Results

This study investigated the factors that contribute to the timeliness of audit reports of PLCs in Bursa Malaysia for the financial year in 2017. Specifically, the study examined on the association between audit report timeliness measured by ARL, in 11 industries and factors that influence the timeliness of the audited financial statement. These factors are type of industry, audit tenure and audit firm reputation. Empirical evidences were provided for 725 companies listed on Bursa Malaysia in 2017, excluding missing data.

Descriptive analysis done in this study gives strong evidence that most companies (97%) are in compliance with the four months' period required by Bursa Malaysia. However, there are still few companies that did not meet this requirement. The findings also show that the mean of ARL is 95.5 days which is approximately 3 months. Therefore, this timely performance by company would give greater impacts on investor and shareholder, also increases the Bursa Malaysia competitive edge in the market.

The correlation analysis is applied to measure the relationship between the dependent and independent variables. As indicated earlier, this study employed the Spearman Rank Correlation Coefficient, a non-parametric test, to measure the correlation since the data is not normally distributed.

Table 1 Spearmen Rho Correlation Analysis

		Type of Industry	Audit Tenure	Audit Firm Reputation	Audit Report Lag
Type of Industry	Correlation Coefficient	1	-0.043	0.067	-0.056
	Sig. (2-tailed)	.	0.252	0.073	0.131
	N	747	726	726	725
Audit Tenure	Correlation Coefficient	-0.043	1	.268**	-.106**
	Sig. (2-tailed)	0.252	.	0	0.004

	N	726	726	726	725
Audit Firm Reputation	Correlation Coefficient	0.067	.268**	1	-.196**
	Sig. (2-tailed)	0.073	0	.	0
	N	726	726	726	725
Audit Report Lag	Correlation Coefficient	-0.056	-.106**	-.196**	1
	Sig. (2-tailed)	0.131	0.004	0	.
	N	725	725	725	725

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

Table 1 shows the results of the Spearman Rho Correlation Analysis. In assessing the relationship between dependent variable and independent variables. The results indicate that there is no significant relationship between type of industry and ARL since p-value is at 0.131, which is more than 0.05. Thus, it can be concluded that the type of industry does not contribute to the ARL in the Malaysian PLCs.

Results in Table 1 also shows that audit tenure and ARL have a significant relationship since the p-value at 0.004 is less than 0.05. The correlation coefficient value of this relationship is 0.106. Based on Cohen (1998), there is a low or weak relationship between audit tenure and ARL since it is less than 0.30. Furthermore, since the direction of the relationship for both audit tenure and ARL was negative, it indicates that as the level of audit tenure increases, the ARL is decreasing and vice versa. This means that as the audit firms work longer in a PLC, the level of ARL would be decreasing. Perhaps, this is because the longer the audit firm serves the company, it becomes more familiar with the company's business and/or its employees and procedures.

Similarly, Spearman Correlation Coefficient test was computed to assess the relationship between audit firm reputation and ARL. The results indicate that audit firm reputation and ARL have a significant relationship since the p-value at 0.000 is less than 0.05. Moreover, the results also show that the correlation coefficient value of this relationship is 0.196. Again, according to rule by Cohen (1998), there is a low or weak relationship between audit firm reputation and ARL since it is less than 0.30. As far as the direction of the relationship, since the direction of the relationship for both audit firm reputation and ARL was negative, it indicates that as the level of audit firm reputation increases, the ARL is decreasing and vice versa. This means that as the audit firm reputation moves from non-Big 4 to Big-4 or otherwise, the level of ARL would be decreasing.

6. Conclusion

One of the most important factors in measuring the transparency and quality of financial statement is timeliness of audit report. The timeliness of accounting information is a major concern particularly to the stakeholders in deriving their decision making. Moreover, Bursa Malaysia Listing Requirements have increased the time pressure for companies and auditors to improve the efficiency of providing accounting information to the stakeholder for more transparency. Findings from this study showed strong evidence that most PLCs in Malaysia (97%) are in compliance with the four months period required by Bursa Malaysia. The findings also show that the mean of ARL is 95.5 days which is

approximately 3 months. Therefore, this timely performance by PLCs would give greater impacts on investor and shareholder, also increases the Bursa Malaysia competitive edge in the market.

On the relationship between the factors that influenced ARL, both audit tenure and audit firm reputation have significant relationships but not for the type of industry. The results implied that audit firm work more effectively when there is long auditor-client relationship and Big 4 audit firms (audit reputation) perform better and faster audit work than their non-Big 4 counterparts in Malaysia.

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A Study on Consumer's Acceptance towards Green Banking Practices

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Abstract

Presently, green practice has become a massive trend in the global banking sector. The concept of green banking has caused the banking industry to introduce paperless concept for its operations and technology adoptions across the country, as an effort to support the go green concept. This concept is also an alternative for the banking industry to reduce the cost of operations while increasing the banking operation productivity. It is very important for the banking industry to fully understand the acceptance of green banking practices among its customers, because this will influence the customers' decisions for fractional banking activities; deposits, credit activities, and investments. The acceptance of customers towards the initiatives of green banking will contribute in enhancing the operation and performance of the banking sector in Malaysia. The main objective of this study is to investigate the determinant contributing to the acceptance of green banking among the customers. This study was conducted in Johor, and it used the simple random sampling. The sample was comprised of 118 respondents who participated in answering the given questionnaires. For the findings, the perceived usefulness and safety were the predictors of the acceptance of green banking practices among the customers.

Keywords: Green banking, acceptance, banking practices, technology.

1. Introduction

As financial institutions, banks can be considered as the non-polluting sector due to their internal operations that do not involve any direct contact with the environment. However, banks can play a role in promoting green banking practices to sustain environmental protection (Meena, 2013, Silva, 2015, Ganesan & Bhuvaneswari, 2016, Herath & Herath, 2019). Most banks all over the world are trying to become 'green' by applying green banking practices by providing information about the environmental and social responsibilities to their customers, to protect the environment and conserve the natural resources.

The green banking practices; also known as the green banking, is a practice and guideline that makes banks sustainable in economic, environmental and social dimensions (Ganesan & Bhuvaneswari, 2016). According to Lalon (2015), green banking is any form of banking that benefits the environment. The green banking has become a trend in today's banking world because it is more convenient and user friendly in nature (Deka, 2018). It provides banking products and services like green loans, green deposits, green mortgages, green credit cards, green checking accounts, online banking, mobile banking and so on (Herath & Herath, 2019).

Furthermore, the green banking concept refers to the banking business that enables the overall reduction of external carbon emission (Rahman et al., 2013, Meena, 2013) and internal carbon footprints (Rahman et al., 2013). According to Rahman et al. (2013), to reduce the external carbon emission, banks should finance green technology and environmental-friendly projects. However, to reduce internal carbon footprints, banks are supposed to cut down their energy consumption on a large scale. There are various definitions and interpretations about green banking from previous researches. However, for this paper, the green banking is focused on internet banking purposes like online banking, mobile banking, e-statement, debit card, credit card and standing orders.

2. Statement of Problem

Recently, technology has taken the role of organizational management. The bank's instincts have also been spared from using the influence of technology in the governance of the country's financial system. Furthermore, by encouraging the green concept, this has made the bank's prerogative in Malaysia to begin to embark on the green concept adoption. Green banking is an initiative for the government to keep the sustainability of resources due to the worsening of global warming that is observed from year to year. Hence, green banking promotes environmental friendly aspects in the banking practices. Green banking has many benefits and advantages (Ragupathi & Sujatha, 2015), such as refraining work involving printed papers and practicing online transactions done through online banking, and at the same time, creating awareness to business people about the environment. Ginovsky (2009) stated that banks should launch new banking products that promote sustainable practices and they need to restructure their bank office operations to implement ecological-friendly practices. Usually, banking activities are not physically related to the environment, but the external impacts caused by their customers' activities are substantial (Shaumya & Arulrajah, 2017). However, not all levels of customers are accepting the concept of green banking, since some of them are still relying on the use of conventional paper practices. Hence,

this study brings the objective of investigating the factors contributing to customers' acceptance on green banking practices.

3. Research Objectives

To address the acceptance of green banking practices among bank customers, the main objective of this study is to examine the relationship between the perceived ease of use, and perceived usefulness and safety with the acceptance of green banking practices among the consumers. The specific objective of this study is to review the available literatures on green banking studies and practices which show relationships between the overall variables and green banking acceptance.

4. Research Methodology

This study is a descriptive research employing the survey method through the distribution of questionnaires. Questionnaires were personally administered to ensure a high response rate. By using the simple random sampling, a total of 118 respondents which comprised of banking customers in Johor, participated in this survey. Apart from descriptive statistics, Pearson Correlation was also employed to establish the relationship between the variables. Cronbach's Alpha was also tested to check the reliability and validity; whereby the result of alpha for the overall questions was 0.845, indicating that it was acceptable. Other than that, the correlation analysis and multiple regression analysis were also conducted to answer the relationship among the perceived ease of use, perceived usefulness, safety, and acceptance of green banking practices among the customers.

5. Data Analysis and Discussion

5.1 Response Rate

In this study, 118 out of 120 distributed online questionnaires were returned, which represented a response rate of 100.00%. Questionnaires were also randomly distributed online among banking customers all over Johor starting from 21st April 2019 until 3rd May 2019.

5.2 Profile of Respondents

Generally, the respondents in this study were mainly customers aged between 21 years old until 30 years old (68.6%; 81), followed by 18 years old until 20 years old (23.7%; 28), 31 years old until 40 years old (4.2%; 5) and from 41 years old until 50 years old (3.4%; 4). Students were found to be the highest number of respondents in this study (74.6%; 88), explaining the majority number of respondents coming from the age groups of 21 years old until 30 years old and 18 years old until 20 years old. This was followed by 14 respondents or 11.9 percent who work as administrators, 8 respondents or 6.8 percent who work as officers, 6 respondents or 5.1 percent are professionals and lastly, 2 respondents or 1.7 percent are general workers.

In term of usage, 44.9% or 53 respondents used the online banking service twice, up to 5 times per month whilst 41.5% (49) used the online banking service for more than 5 times per month. Only 13.6 percent or 16 respondents used the online banking for only once per month. The value of this usage is considered as an important attribute to show and prove how familiar online banking can be to all respondents.

Table 1 Demographic Profile (n = 118)

	Categories	Frequency	Percentage (%)
Age	18-20	28	23.7
	21-30	81	68.6
	31-40	5	4.2
	41-50	4	3.4
Occupation	Administration	14	11.9
	General Worker	2	1.7
	Officer	8	6.8
	Professional	6	5.1
	Student	88	74.6
Usage	1 time per month	16	13.6
	2-5 times per month	53	44.9
	More than 5 times per month	49	41.5
Purpose	Banking statement	1	.8
	Billing payment	28	23.7
	Checking an account balance	21	17.8
	Investment	1	.8
Frequently use	Paying a financing	7	5.9
	Transferring money	60	50.8
Awareness	No	42	35.6
	Yes	76	64.4

Apart from that, this study also shows the main reasons why people use online banking service; transferring money (50.8%; 60), followed by billing payment (23.7%; 28), checking an account balance (17.8%; 21), paying a financing (5.9%; 7) and lastly, checking banking statement, and for investment purposes which is (.8%; 1) each. Lastly, in term of customers' awareness towards the concept of green banking practice, (64.4%; 76) were aware of it while (35.5%; 42) were not aware of it.

5.3 Reliability Analysis

Table 2 shows the reliability results for all measurements tested in the study. There was substantial variation of Cronbach's Alpha values for all variables ranging from 0.778 to 0.872.

Table 2 Reliability Statistics

Variable	Cronbach's Alpha	Number of Items	Number of Deleted Items
Perceived ease of use	.778	5	–
Perceived usefulness	.871	5	–
Safety	.872	4	–
Acceptance of green banking	.860	4	–

Nunnally and Bernstein (1994) suggested that when the Cronbach's alpha values are greater than .70, they are generally considered desired or adequate. Thus, this shows that all four (4) variables in this study met the threshold of the analysis. This suggests that the measurements of perceived usefulness, perceived ease of use, safety and acceptance were acceptable, valid and reliable.

5.4 Correlation Analysis

The results of the Pearson's correlations between all variables were illustrated in Table 3. All tested variables were positively and significantly correlated between the variables ($p < .01$). This shows that all variables had strong and positive associations between each other.

Table 3 Pearson Correlation Analysis

Variable	1	2	3	4
1.Perceived ease of use	1			
2.Perceived usefulness	.769** .000	1		
3.Safety	.655** .000	.593** .000	1	.
4.Acceptance	.488** .000	.632** .000	.504** .000	1

** Sig.level at 2 tailed

5.5 Multiple Regression Analysis

Regression analysis of coefficient test as exhibited in Table 4 was used to test the coefficient between the independent and dependent variables. The results from the table show that the beta of perceived ease of use was (-0.132), followed by perceived usefulness (0.645) and safety (0.244). Based on the result, perceived usefulness had the highest impact on acceptance of green banking among banking customers with beta value equal to 0.645.

Table 4 Multiple Regression Analysis

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
	0.926	0.353		2.623	.010
Perceived Ease of Use	-0.132	0.145	-0.110	-0.913	0.363
Perceived Usefulness	0.645	0.126	0.578	5.132	0.000
Safety	0.244	0.100	0.233	2.441	0.016

Dependent variable: Acceptance of Green Banking

According to the result, only two variables namely perceived usefulness and safety were the significant predictors to acceptance of green banking, whereby perceived usefulness ($p=0.000$) and safety ($p=0.016$). On the other hand, the perceived ease of use was not a predictor of acceptance of green banking ($p=0.363$). Regression analysis was conducted to fulfil the research objective; to examine the relationship between the perceived ease of use, perceived usefulness and safety relationship with the acceptance of green banking. Based on regression analysis results, it can be concluded that perceived usefulness was the factor that mostly influence the acceptance of green banking practices with the t-value of 5.132 and bet value of 0.645, being the highest among all variables.

6. Conclusions and Recommendations

The findings of this study showed all the two dimensions which are perceived usefulness and safety can be used to predict the consumer's acceptance towards the green banking practices. However, the findings also suggest the perceived usefulness is the most significant factors in influencing the consumer's acceptance of green banking practices. Several implications can be derived from this study. Firstly, it can assist the banking institutions to strategize their marketing to develop new innovative banking product that suit with the green banking concept. To meet with the consumer's demand, the banking institutions must bear in mind that consumer's acceptance is very important, a comprehensive system and consumer guidelines must be aggressively conducted on promoting the consumer to use the green banking practices. One of the recommendations is the bank's top management should prepare a demonstration video at their own websites on how to register and use the internet banking so that consumer or users can get knowledge from it. It is also essential for the consumers to practice it as the go green or paperless concepts is into the trend nowadays.

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Distribution of Profits under the Companies Act 2016: Satisfying the Insolvency Test

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Abstract

Under the law, distribution of profits or dividends may only be paid to members of a company if there are profits available for that purpose. The Companies Act 2016 requires that the company can only make the distribution to the shareholders out of profit if the company is solvent. Previously, in the Companies Act 1965, the company can pay dividends to its shareholders out of its profits and there is no requirement that the company must fulfill the solvency test. The aim of this paper is to look at the new requirement of solvency test and in what circumstances the company can pay out its dividends. It also examines the effects of non-compliance with the solvency requirements and the implications to the company and directors (if any) under the Act.

Keywords: Dividends, profits, insolvency test, non-compliance, implications.

1. Introduction

The term 'capital' referred to loans of money and later expanded to include other assets. These funds were used to engage in the company's trade. In modern company law, capital deals with share capital contributed by shareholders and debt capital advanced by creditors. Share capital confers rights in the company to the shareholders, while debt capital concerns a set of rights against a company arising from a contractual relationship between a debtor and a creditor. Share capital funds are made up either wholly paid or partly paid shares which represent the legal measure and the actual amount subscribed by shareholders.

Generally, a company is not allowed to pay dividends out of its capital because the amount contributed by shareholders signifies the company's capability to make repayment. This point was accentuated by the decision in *Re Exchange Banking Flitcroft's Case* (1882) 21 Ch D 519 at page 553 when Jessel MR explained:

The creditor has no debtor but the impalpable thing the corporation, which has no property except the assets of the business. The creditor, therefore, I may say, gives credit to that capital, gives credit to that company on the faith of representation that the capital shall be applied only for the purpose of the business, he has therefore a right to say that the

corporation shall keep its capital and not return it to the shareholders, though it may be a right which he cannot enforce otherwise than on a winding up.

The common law rule on distribution rule has been incorporated into the statutory provision. This can be seen where section 131 of the Companies Act 2016 states the company may only make a distribution to its shareholders out of profits available if the company is solvent.

2. Definition of Dividends

The Companies Act 2016 has added a new requirement in section 131 in that the company has to be solvent prior to the distribution of profit. The authorisation for declaration of dividend may be made by the directors under section 131 at such time and in such amount, they consider appropriate if the directors are satisfied that that company will be solvent immediately after the distribution is made. The definition of a solvent company for the purpose of distribution of profit is given in section 132(3) where the company is able to pay its debts as and when the debts become due within twelve months immediately after the distribution is made, then the company is deemed to be solvent. The solvency test in the section adopts the cash flow test which focuses on the ability of the company to meet the current demands irrespective of whether the company is possessed of assets, which, if realised, would enable it to discharge its liabilities in full.

Heath J in the New Zealand's case *Re DML Resources (in liq)* [2004] 3 NZLR 490 at 492 explained the rationale for adopting the statutory solvency test before a company enters into transactions that involve distribution of funds or property to shareholders. He stated that:

"The Act requires the board of directors of a company to determine whether it is solvent before returning wealth to its shareholders. As shareholders stand behind creditors in the priorities in which they are paid on insolvency, it is inappropriate for a shareholder to receives benefits, ahead of creditors, at a time when the company is insolvent. The need for a company to be solvent before distributions are made to shareholders is underscored by provisions in the Act by which a company may seek recovery of amounts distributed from shareholders and directors: see sections 56(1), (2) and (4) of the Act"

In *Marra Developments Ltd v BW Rofe Pty Ltd* [1977] ACLR 185; the court concluded that at the time when the dividend is declared there must be profit available. There is no requirement that the profits must be available at the date for satisfaction of the dividend. Hence, the company could in theory declared dividends if its account shown profits between the end of financial year and declaration of dividend. The company may in the event it suffers losses after the date of declaration borrow in order to satisfy the dividend though over times it may not be prudent decisions to make.

In *Hilton International Ltd v Hilton* [1989] 1 NZLR 442; the court stresses that in addition to dividends may only be aid out of profit, the company could not make any declaration if it is trading insolvency or if the declaration would jeopardise the company's solvency. Directors may be in breach of duty and are liable to compensate the company of its losses.

Section 365 under the Companies Act 1965 provided that the company can only pay dividends to its shareholders out of its profits or pursuant to section 60. Section 60 of the

Act dealt with the payment of dividends pursuant to the application of the share premium account of a company provided that the payment such dividends are satisfied by the issues of shares.

3. Remedial Consequences of Improper Dividends

It is important to identify what the remedies are because without satisfactory legal redress, the law will not be effective in meeting the aims of the statute. There are several remedies under the statute and common law which give rights to the company, shareholders and creditors in the event distributions are made not in accordance with the law. The provisions in the Companies Act 2016 gives more remedial rights than those in the Companies Act 1965.

3.1 Civil Remedies

Section 133(1) of the Companies Act 2016 also allows the company to recover the amount of distribution paid to the shareholders which exceeds the value of any proper distribution that could have been made. The same section allows the shareholders to keep the distribution if they received the distribution in good faith and has no knowledge that the company has failed the insolvency test in section 132.

The company can recover the amount which exceeds the value of any proper distribution that could have been made from its director or manager who willfully pays dividend in contravention with section 132 which he knows from his knowledge is not profitable. The burden is on the company to show that the director has knowledge that the company is not making profit, and this is subjective element.

Under the Companies Act 1965, section 365(2) imposed liability on every director or manager who willfully pays or permits to be paid or authorizes the payment of any improper or unlawful distribution to compensate creditors or liquidators for the amount of debts due to them. The provision in the Companies Act 2016 allows only the company to recover the amount of distribution paid while in the 1965 Act the creditors or liquidator have right to recover under the Act the amount owed by the company to them.

3.2 Criminal Penalty

Section 132(5) of the Companies Act 2016 directors or officers of the company who willfully pays or permits to be paid or authorizes the payment of any improper or unlawful distribution shall on conviction, be liable to imprisonment for a term not exceeding five years or a fine not exceeding three million ringgit or to both.

The penalty for imprisonment in the 2016 Act has been reduced from ten years to five years while the amount of fine in the former is increased from two hundred and fifty thousand to three million Ringgit Malaysia. The increase in the amount of fine on directors or managers indicates the law seriousness of the offence and should act as deterrent to others.

Section 365(2) stated that every director or manager who willfully pays or permits to be paid any dividends out of what he knows is not profits, except pursuant to section 60-

- (a) Shall without prejudice to any other liability be guilty of an offence against this Act;
- (b) Shall be liable to the creditors of the company for the amount of the debts due by the company to them respectively to the extent by which the dividends so paid have exceeded the profits and that amount may be recovered by the creditors or liquidator suing on behalf of the creditors.

The penalty is imprisonment for ten years or two hundred and fifty thousand ringgit or both. The term willfully in the section shows intention or knowledge on part of directors that the distribution made is not from profits.

3.3 Disqualification of Directors

Directors may also be subjected to disqualification under section 199 of the Companies Act 2016 if they have within the last five years, been directors of two or more companies which went into liquidation resulting from the company being insolvent due to their conduct as directors, or due to contravention of duties as directors or due to habitual contravention of the Act.

3.4 Common Law Liability

3.4.1 Duty to Act Bona Fide

Directors owe loyalty and good faith to the company under common law has been embodied in section 213(1) of the Companies Act 2016. Lord Greene MR in *Re Smith & Fawcett Ltd* [1942] 1 All ER 542 held that: they must exercise their discretion bona fide in what they consider not what the court may consider to be in the interests of the company and not for any collateral purposes". This duty is wide enough to cover the situation where the directors after declaring dividends found the company to be insolvent. It is a settled law that directors are required to take into consideration the interests of creditors when insolvency lurks because they are now the residual claimants of the company's assets. Directors who have been found in breach of their duty could be made liable to pay the losses suffered by the company. This can be seen in the case of *Hilton International Ltd v Hilton* [1989] 1 NZLR 442.

3.4.2 Duty of Care and Diligence and Skills

Directors may also be subjected to breach of this duty if their action in declaring dividends resulting the company to become insolvent. Section 213 (2) of the Companies Act 2016 provides that in discharging their duties, directors are expected to act based on the knowledge, skill and experience of a reasonable director. However, the court is also required to take into consideration the knowledge, skill and experiment of the director in question. Directors who have breached this duty are liable to make good the loss. The Companies Act 2016 has under section 213(3) imposes on those who contravene the section to be liable to imprisonment for a term not exceeding five years or to a fine not exceeding three million ringgit or both. The section is also applicable to those who contrives section 213(1).

3.5 Liabilities under the Insolvent Trading and Fraudulent Trading Provisions

There is a possibility that the directors could be made liable for fraudulent trading provision in section 540 of the Companies Act 2016. A declaration of valid dividends by directors constitutes a debt of the company which needs to be paid out to shareholders. Thus, if the directors make declaration while not satisfying the solvency requirement, the directors could be held responsible under fraudulent trading provision if the company ends up in liquidation.

Section 540 provides that “If in the course of winding up of a company or in any proceedings against a company it appears that any business of the company has been carried on with intent to defraud the creditors of the company or creditors of any other person or for fraudulent purpose, the Court on application of liquidator or any creditor or contributory of the company, may, if the Court thinks proper so to do, declare that any person who was knowingly a party to the carrying on of the business in that manner shall be personally responsible, without any limitation of liability, for all or any of the debts or other liabilities of the company as the Court directs”

The wordings of the section are wide enough to cover the declaration of dividends when the company is not solvent. In *LMW Electronics Pte Ltd v Ang Chuag Juay & Ors* [2010] 1 MLJ 185 at page 199, the court concluded that the phrase “carrying on the business” to include a myriad of activities and transactions undertaken by the company which did not necessarily involve trading.

In *Kawin Industrial Sdn Bhd (in liquidation) v Tay Tiong Soong* {2009} 1 MLJ 723 at 732-733, the court explained that finding an intention to defraud creditors means an intention to deprive creditors of an economic advantage or inflict upon them some economic loss. The decision in the case is consistent with the decision in *R v Grantham* [1984] QB 675 at 683-684 which stated, “fraudulent trading can be made out even if it is not possible to establish that anyone has suffered a loss”.

When the company made distribution to the shareholders when it is not solvent, the company is in fact has been incurring debts. Under the law, the company may be subjected into the liability under the fraudulent trading provision in section or under the insolvent trading position in section.

For civil liability, section 540 provides that “...shall be personally responsible, without any limitation of liability, for all or any of the debts or other liabilities of the company as the Court directs”. Thus, directors could be made personally liable for an unlimited amount as the Court deems fit. The punitive aspect in the section is expected since the section originated from the old UK fraudulent trading section which was based on criminal liability. The main purpose of imposing a duty on directors at that time was to curb incidents where those who had been entrusted with public funds misused them, hence the punishment.

4. Defences

The new section introduces a defence to directors against consequences of paying improper dividends. The section imposes a positive duty on the director to take steps to prevent distribution if the company ceases to be insolvent prior to distribution. There is no

such duty imposed by the Companies Act 1965. Directors, therefore, need to be familiar with the financial position of the company. The directors must maintain supervision and monitor the company's status and if necessary, review plans and decisions they have made. The standard of duty in the section indicates the objective element and therefore in determining whether there are grounds to believe that the company ceases to be solvent, courts are to have regards to the knowledge, skills and experience of a reasonable person as well as the individual director's concern. The director then should show that he has taken all the reasonable steps that the experienced and skilled directors would have taken. In doing so, it would be a defence to directors from the liability in section 132(5).

Section 132(3) of the Companies Act 2016 states that in the event that after a distribution is authorised and before it is made, the directors cease to be satisfied on reasonable grounds that the company will be solvent immediately after the distribution is made, the directors shall take all necessary steps to prevent the distribution being made.

Previously, the company may declare dividends if at the time of declaration there the company is making profit. Hence, companies can legally pay dividends if their accounts indicate profit and the company borrow in order to pay dividends. The solvency requirement in the Companies Act 2016 may prevent the company from making commercial imprudent to pay dividend.

The requirement in the section that directors to take all necessary steps to prevent distribution can act as a defense to directors. In other words, directors who can show that they have taken all necessary steps may avoid the consequences of paying improper dividends described above. The wordings of the section seem to indicate that the test of whether the directors have taken all necessary steps is objective rather than subjective.

The section which imposes a positive duty on the directors to take steps to prevent distribution from being made is almost similar to the wrongful trading provision in the UK Insolvency Act 1986. In the UK, section 214 once the liquidator is able to show at which point before the commencement of the winding that the director knew or ought to have concluded that there were no reasonable prospects of avoiding insolvent liquidation, the burden shifts on the directors to show that he "has taken every step he ought to have taken". The directors must convince the court that the steps taken were with the aim of minimising loss to creditors.

If the directors are held to be liable under section 540 for fraudulent trading, they could be subjected to both criminal and civil liabilities. This is because section 540 consists of both criminal and civil liabilities. The consequences of breaching the section is that directors could be subjected to imprisonment for a term not exceeding ten years or to a fine not exceeding one million ringgit or both.

5. Conclusion

The beneficial effect of the proposition that distribution could not be made out of the capital and the company can only declare dividends out of profit in the Companies Act 1965 could be understood in the light of assumptions in the nineteenth century. The assumption was that a registered company would be like a deed of settlement company with a large membership.

The Companies Act 2016 has introduced a new test, a solvency test before a distribution of profits can be made to shareholders. The requirement is in line with the Companies legislation in New Zealand and Australia which requires that a statutory solvency test must be satisfied when the company enters into transactions that involve distribution of funds to shareholders. The rationale for adopting this concept can be seen in the case of *Re DML Resources (in liq)* [2004] 3 NZLR 490, which is related to the shareholders' position as residual claimants in winding up.

A shift towards solvency test of the company is said to be able to reflect the current position of the company because it is a relevant concept in protecting the interests of the creditors' interests. The law which prohibits distribution being made to shareholders if the company could not maintain its solvency thereafter is to prevent the misallocation of wealth from the company to shareholders since such act would not benefit the company.

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Millennial Grits on Professional Accounting Profession in A Malaysian Setting

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Abstract

The purpose of this paper is to study how the accounting students' grit level would affect their intention to become professional accountants. The research was conducted using a questionnaire survey structured with two independent variables namely consistency of interest and perseverance of effort and translated into 17 statements which was then distributed to accounting students at four different universities in the Klang Valley. In total, 153 usable responses were received. The analysis shows that all predictor variables explain about 6.5 per cent of the variability of students' intention to become professional accountants. Further analysis also shows that one independent variable, namely perseverance of effort has direct significant relationship with a student's intention to become professional accountant.

Keywords: Accounting students, accounting education, accounting profession, professional qualification, professional qualified accountant.

1. Introduction

Globalisation has brought many changes in the accounting profession. Among the trends that are creating waves in the profession are Big Data and Analytics. These have caused many companies of all sizes to create massive structured, unstructured and semi structured data every day. Organizations harnessing Big Data would be able to find new insights and discover unique patterns of their customer behaviour which for instance contribute to the new businesses that are previously not possible. At this situation, professional accountants can leverage on Big Data because they have the ability to digest and analyse data in such a way that it makes it easier for the management to make informed decisions. Moreover, accountants could play strategic roles in their respective organizations as their ability to interpret and provide useful insights into data could create business opportunities. Therefore, it is very significant for the accountants to be updated with the latest trends in business to be industry relevant. Hence, professional education

and certification play a key role. The professional bodies need to strategize their direction to ensure that they build in key trends and competencies which allow future accountants to equip with the necessary skills and knowledge be ahead in their career.

During the Malaysian 2018 Budget announcement, the government targeted that Malaysia needs 60,000 accountants to achieve the High-Income Nation status. This reflects that the government recognizes the role of accountants in the economy. According to data taken from Malaysian Institute of Accountants (MIA), currently there are about 33,000 accountants registered with the Institute. Apart from the numbers game, this could address the talent gap by identifying student grits on the professional accountants through their attitude and skills to fulfil Malaysia's development needs.

As mentioned by Pate et al. (2017), grit is one such non-cognitive factor or trait being discussed widely and has been defined as perseverance and passion for long term goals. This involve long term stamina, enabling individuals to work strenuously toward aim over years. Based on the previous studies by Duckworth et al., (2007) individuals displaying high levels of grits maintain effort and interest in reaching goals even in the face of significant setbacks. Nowadays, much focus has been given to Gen Y, Z and the millennial as they need to be flexible, agile and adapt well to the changes happening in their respective organizations and the accountancy profession as well. They also need to be articulate and have the fortitude to overcome challenges. Therefore, by identifying their grits at the university will help to build the attributes in preparing them to enter the business world with a sound grasp of business and accounting as well as with a foundation of ethics and analytical skills. Today, the current economic situation is testing the Millennial's grit as the economy and low pay are frustrating and stressful. One might assume that all Millennials have grit to spare in this hyper-confident, self-promotional era but based on an online study only 23 per cent of employers agreed. Their most significant complaints were that the graduates lacked communication skills, creative problem solving and the self-drive that leads to continuous, sustained effort in the workplace. Technology is swiftly altering many industries, and employers must be sure that new hires can not only keep pace with the changing demands but also be effective innovators as well. This requires grit. Based on a study conducted by De Maria (2013), millennials are technological savvy because they are born in the era of internet and technological advancement. Therefore, the study fills in the gap in the literature on grits by focusing on the millennials accounting student and how it influences on their professional accounting career.

Subsequently, this study is conducted to examine the factors that influence millennial accounting student's grit on the professional accounting career in Malaysia. This study can provide information to higher education institutions in helping the possible course structure and training that suits their interest and skill in encouraging them to pursue the professional courses. In addition, this will be beneficial to the professional bodies in planning the strategy to increase the number of professional accountants in Malaysia. According to Malthus and Fowler (2009), the credibility of professional body to attract new members among the factors influence the future viability especially for the university graduates.

1.1 Objectives of the Study

The study aims to fulfil the following objectives:

- i. To identify millennial student's grit on accounting profession.
- ii. To ascertain whether there is a relationship between student's grit and their intention to pursue a professional accounting program.

2. Literature Review

Millennials in accounting are not just going to force changes in the tools used by the industry but they are also going to demand greater flexibility in how they work. This is very important to explore on the millennials as 22.1% of the population are millennials and their numbers are growing rapidly. Thus, it is imperative to understand what type of choices they make and its implications on the accounting profession (Bonaparte, 2018). In the era of instant communication, sitting with the routine all day is far from essential. Introducing flexible start times and working locations could make all the difference to the productivity of millennial staff members. In fact, Deloitte's 2016 Millennial Survey, which polled almost 7700 millennials from 29 countries, found that 51 per cent believed that productivity at their organizations would increase if employees were permitted to work outside of their primary office location. Millennials entering the workforce will have to lead older generations in the adoption of new technologies and ways of working. This is especially true in the accounting industry, where legacy systems are being phased out in favour of cloud-based tools. Cross-generational collaboration will ultimately drive innovation in accounting and increasingly it will be impatient millennials behind the wheel.

Given the body of evidence in broader populations, grit is now garnering attention and being researched in linking with the millennials. The issue is important to be studied as many people believe there is a gap between what universities tend to offer students, and what the job market requires (Sadaghiani, 2010). Thus, the institutions have a role to update their curriculums as the development of the oral and written communication skills that are so crucial in an innovation economy. In addition, the millennials have also shown that they are interested in developing the requisite skills for the workplaces. Therefore, this study is trying to explore the millennial grits in accounting profession to give contributions to the existing findings.

Grit has been defined as 'strength of character involving courage and resolve (Duckworth et al., 2007). Notable in the study of grit was that it is conceptualized as a personality trait. In order to study grit in greater detail, the researcher tried to link with personality of professional accountants as it has become greater demand for the industry nowadays in having professionals with good traits. The on-going cognitive dissonance between accounting students and required competencies to perform successfully as a professional accountant is surprising. Nowadays, in the accounting context, the ability to pivot and learn new skills, is at the core of grit. In other words, grit is adapting to new realities as it is required as opposed to the traditional skill which meant obtaining good grades. Technical savvy is another characteristic that requires grit. The accounting profession is fraught with disruption and technological changes and today's accounting students are digital natives and Gen Z are well positioned to learn and evolve with new technologies that give them the ability to create a better work product more efficiently.

Eskereis-Winkler et al. (2014) also showed that grit may be associated with career success. Success in sales representatives at a vacation ownership corporation, measured by retention of three months or more, was positively correlated with grit. Because prior research showed that the Big Five personality traits predicted retention in sales, this longitudinal study was conducted to determine whether grit contributed to retention above and beyond Big Five traits (openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism). Moreover, career success entails flourishing within one's chosen field. It is very interesting to explore the character of Millennials on being successful, how it is obtained from sense of identity and meaning.

In order to determine grit, this study employed the Short Grit Scale (Grit-S) method by Duckworth and Quinn (2009) in order to determine a more efficient measure. This is the shorter version of the original scale called Grit-O which was developed by Duckworth et al. (2007) in order to determine why some individuals were more accomplished than others despite equal intelligence. Based on their study, they found two subscales emerged from completing a two-factor oblique rotation, *Consistency of Interest* and *Perseverance of Effort* that reflected internal consistency and highly correlated with one another ($r=0.59$, $p<0.001$). Using the Duckworth and Quinn (2009) method, *Consistency of Interest* defined as stamina in pursuits over time and *Perseverance of Effort* refers to stamina in determination over time. Following to that, the Grit-S demonstrated emerging validity and strong reliability as mentioned by Aron et al., (2013). Thus, the Grit-S served as a useful scale in this study due to the psychometric strength of the survey and its short length. Therefore, the paper used the total grit score, as well as the *Consistency of Interest* and *Perseverance of Effort* subscale scores in statistical analyses.

According to "Trends in the Supply of Accounting Graduates and the Demand for Public Accounting Recruits," an AICPA 2015 report, "total accounting enrolment continued to increase, with a majority of the increase coming from a 34% rise in masters in accounting students." Despite growing enrolment in accounting degree programs, 68 per cent of Chief Financial Officers say it is "challenging to find skilled candidates for accounting jobs and other professional-level positions." If degrees awarded are at an all-time high, why are these roles so hard to fill? This question can be answered through identifying the grit for this millennial group on how it might influence them in their future accounting profession.

2.1 Gap in Knowledge and Literatures on Millennial Grits and Professional Accounting Profession

Despite the promising research that demonstrated positive relationship between grit and success, many of the early studies of grit used populations such as high achieving students (Duckworth et al., 2007; Maddi et al., 2012) as their sample. Due to the select population on which these studies were based, there is a need to include millennials. They have different definition of achievement to determine the predictive power of grit beyond other factors and to generalize to a more diverse population that is relevant in this globalization era.

Since the study is using Consistency of Interest (passion) as one of the scales, the study hypothesized that grit could be applied differentially depending upon the level on interest the individual had in completing a particular task. The millennials have different main characteristics which are, they are receptive towards diversity, independent and positive (Zainudin et al., 2018). Therefore, there is a need to explore the personality dimension of

grit as it is currently conceptualized as a personal trait (Duckworth et al., 2007). Thus, it is very significant to explore grits on the millennials within the context of professional accounting. There is a lack in literature on the exploration of personal relevance of the grit construct or how it may manifest differently depending on the context.

Outcome measures thus far include mostly academic achievement; and choosing professional accounting as an outcome variable has not yet been studied to a great extent. Additionally, further research is needed on the process of future career options to include the factors influencing grit that may contribute to career as professional accountant. This would help an exploration of how grit manifests within the context of the professional accountant would help answer questions about the relevance of the construct within the career domain and whether the construct is more trait-like or more similar to a personality dimension.

Thus, in achieving the main objectives of this study, one research question was formulated:

Do the two millennial grits namely, consistency of interest and perseverance of effort motivate an accounting student to be a professional accountant?

Based on the discussions previous literary works, the research model is illustrated in Figure 1 below.

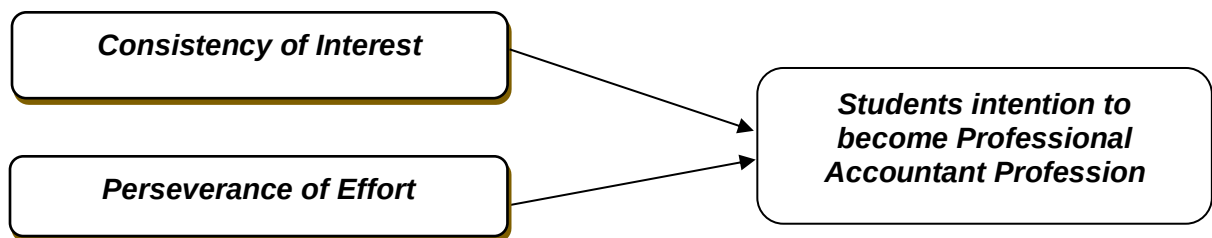


Figure 1 Research Model

The research model was designed to investigate the relationship between the independent variables (consistency of interest and perseverance of effort) and the dependent variables (intention to become professional accountant).

3. Research Methodology

The relationship between millennial grits of accounting students' in Malaysia and to become professional accountant was investigated. Based on the previous literary works, the two influencing factors were identified as consistency of interest and perseverance of effort. Therefore, this research was based on the primary data gathered from the distribution of structured questionnaires to the accounting students from four universities in the Klang Valley. The main advantage of questionnaire survey is the reduced time and cost of carrying out as compared to the personal interviews (Babbie, 2013). In addition, it allows the respondents to complete the questionnaire in their own time and in a more convenient way compared to the face to face interview (Loo, 2006).

3.1 Participants

The participants of this study consisted of accounting students from Universiti Sains Islam Malaysia (USIM), Universiti Kebangsaan Malaysia (UKM), Universiti Islam Antarabangsa Malaysia (IIUM) and Universiti Kuala Lumpur Business School (UniKL Business School).

3.2 Data Collection

The data for this research was gathered from several sets of questionnaires distributed to all accounting students in the four participating universities. The data collection period was approximately one month, commencing in middle of November and ending in the middle of December 2018. Most of the questionnaire was distributed using Google form to the targeted participants. Three sections were available in each questionnaire, starting with Section A: Demographic information, Section B: Future plan after graduation, and Section C: Students grit. The questions in Section C required students to express their opinions through a five-point Likert scale, which ranged from 1 – strongly disagree to 5 – strongly agree.

3.3 Data Analysis

The data analysis of this study utilized the Statistical Package for the Social Sciences (SPSS) software. This process was done carefully in order to achieve the objectives. Furthermore, frequency and means analyses were primarily used in the respondents' profile, namely gender, year of study, ethnicity and current cumulative grade point average (CGPA). Meanwhile, multivariate regressions were used to analyze the variables determining the millennial grits on becoming professional accountant.

3.4 Demographic Profile of Respondents

A total of four questions were formulated to determine the respondents' demographic profile. The demographic profile consisted of the respondents' institution, year of study, ethnicity, gender and current CGPA. The descriptive analysis of the respondents' background information is illustrated in this section.

Based on the analysis of the respondents' institution indicates that about 40.5% are students from USIM, 48% from UKM, 21.6% from IIUM and 6.5% from UniKL Business School. Malaysia is a multi-cultural country with the main ethnic group, Bumiputra. In this study, 100% of the respondents are Malay Bumiputra. In terms of gender, the respondents are 77.1% female and 22.9% male. Most of the respondents (53.6%) have a current CGPA between 3.00 and 3.49.

3.5 Assessment of Reliability and Validity

Respondents were required to explain their grit personality through seventeen attitudinal statements. These statements comprised two aspects, namely the consistency of interest and perseverance of effort. In evaluating these aspects, more than one item was involved, and both reliability and validity tests were conducted.

The reliability and consistency of the measurement were valid as its alpha coefficient value was higher than the acceptable value, which was 0.6 (Hair, Black, Babin, Anderson, & Tatham, 2010; Sekaran, 2003; Nunnally, 1978). This can be seen in Table 1.

Table 1 Reliability Coefficient of Influencing Factor of Millennial Grits to become Professional Accountant

Determinant/Factor	Number of Items	Alpha Coefficients
Consistency of interest	10	0.694
Perseverance of effort	7	0.705

4. Analysis of the Variables

This section displays the analysis of the association between two influencing factors (consistency of interest and perseverance of effort) and millennial grits to become professional accountant. To identify the factors of millennial grits of this matter, regression analysis was carried out. An equation was chosen for the proposed regression model, as shown in Equation 1.

Equation 1 Regression Analysis Model to Millennial Grits to Become Professional Accountant

$$Y = \beta_0 + \beta_1(X_1) + \beta_2(X_2) + e$$

Where:

Y = millennial grits to become professional accountant,
X₁ = consistency of interest,
X₂ = perseverance of effort, and
e = error.

It was found in the evaluation of the assumption's regression model that the model was in accordance with the four assumptions of heteroscedasticity, multicollinearity, linearity, and normality. Table 2 shows the results of the regression analysis conducted on the association of the consistency of interest and perseverance of effort with millennial grits to become professional accountant.

Table 2 illustrates the results of the regression analysis, which was conducted to evaluate the model of millennial grits to become professional accountants. From the results, the regression models associated with the millennial grits were shown to be statistically significant ($p = 0.006$). Based on the predictor variable, 6.5 percent of the variability of the millennial grits was due to the independent variables of this model. The formulation of the multiple regression analysis for the two independent variables is also shown in Table 2. Between these two variables, the perseverance of effort (Beta = -0.273 and $p = 0.003$) had a significant influence on the millennial grits to become professional accountant. As for the other variable namely consistency of interest, these were not found to be significant influence towards millennial grits to become professional accountant.

Table 2 Summary of Results of Multiple Regressions – Millennial Grits to Become Professional Accountant

	B	SE	Beta	F-value	P-value
Consistency of interest	0.049	0.103	0.043	0.481	0.631
Perseverance of effort	-0.298	0.097	-0.273	-3.072	0.003*

Model Summary: $R^2 = 0.065$; Adjusted $R^2 = 0.053$; $F(153) = 5.256$; $p(0.006) < 0.05$

*Significance level is at $p < 0.05$.

5. Conclusion

Despite significant interest in the profession, not many, especially the Bumiputra graduates, have continued to pursue professional qualifications. This is evidenced by the low percentage of Bumiputra professional accountants registered with Malaysian Institute of Accountant (MIA). As such this research was conducted to better understand this predicament. This study is undertaken specifically to understand how the accounting students' grit would affect their intention to become professional accountants. With the sample of the study comprising accounting students from four institutions in Klang Valley who are of Bumiputra ethnicity, the findings show that all predictor variables explain about 6.5 per cent of the variability of students' intention to become professional accountants. Further analysis also shows that one independent variable namely perseverance of effort has direct significant relationship with a student's intention to become a professional accountant.

An interesting area for further research could be the employer's perspective on the accounting graduates and the skills they have developed during their studies, as well as a survey on their professional rights. This is because grits are a growing skill needed for the graduates in the search for jobs especially in the professional context to secure their future. Another issue worth surveying could be to what extent further studies affect millennial grit. In addition, the competent bodies can use and broaden studies regarding the variables that influence the intention of these future professionals to develop more adequate and consistent courses for the market. For millennials, another possible approach is to develop actions focused on supporting professional practise to increase the interest and knowledge of the students in accordance with their local needs.

This study, as in any scientific research, presents limitations due to the researchers' decisions regarding the methodological design. However, these limitations open up opportunities for new studies. One of these is the sample definition, since for example, the opinion of the students which include the private universities, could have been addressed. Another limiting factor may be the simplicity of the questionnaire that marks the validity of the results of a particular point, since there may be other variables that influence the millennial's grit factors that influence the choice of professional career that were not considered.

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Environmental Experiences and Positive Environmental Deviance towards Environmental Disclosure Quality: A Conceptual Framework for Internal Corporate Governance

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Abstract

This paper presents a theoretical proposition based on an institutional theory for environmental disclosure quality. The argument is based on an internal behavioral governance mechanism, namely the cognitive influence of a board of directors' and chief executive officer's environmental experience on environmental disclosure quality using positive environmental deviance as the mediator. This paper contributes to the literature by providing a fundamental explanation of how organizations deviate positively from their peers who focus solely on external motivation for corporate environmental reporting practices, whereas the internal motivation, the cognitive influence of internal governance members, should be the focus for better environmental disclosure practices. The concept of positive environmental deviance is relatively new, so it offers an interesting avenue for further research, especially in the context of developing countries. Overall, this paper sheds light on the internal behavioral governance mechanism and positive environmental deviance of environmental disclosure quality. This will hopefully attract researchers, practitioners and policy makers to view, more seriously, this area of concern.

Keywords: Environmental disclosure quality, positive environmental deviance, internal corporate governance, institution, environmental experience.

1. Introduction

Malaysia and other ASEAN (Association of Southeast Asian Nations) economies are increasingly vulnerable to the impact of climate change, biodiversity losses and water scarcity. These problems are allied with serious social and economic implications, which affect the security and stability of the region. Typhoon Haiyan in the Philippines, a major

water crisis in one of the most populace states of Malaysia, devastating floods along the east coast of Malaysia and air pollution caused by forest fires in Kalimantan and Sumatra all make us apprehensive about the region's future. A recent study by the Asian Development Bank showed that economic losses due to disasters have outpaced the region's economic growth, and will continue to threaten the economic gains of these emerging markets (Asian Development Bank, 2013).

Given the emergence of environmental issues and their massive impact on our economy, over the past decade there has been growing pressure on corporations to be more transparent when disclosing their business-related environmental impacts. Increasing CSR (corporate social responsibility) and sustainability awareness have driven corporate sustainability reporting to be more focused on the material issues of interest to stakeholders and investors. In fact, the importance of environmental sustainability concerns has led companies worldwide to improve their corporate environmental sustainability practices by measuring, managing, and reporting on their environmental impacts beyond regulatory compliance and their corporate environmental responsibility practices. Nowadays, environmental issues are a major concern for the majority of the world's largest corporations, including the 250 top global (G250) companies (KPMG, 2015).

To ensure environmental accountability, the implementation of high standards and best practices, the Global Reporting Initiative (GRI) has been recognized as the most recognized voluntary standard-setting device and is regarded as the "de facto global standard" for sustainability reporting worldwide (Hahn & Kühnen, 2013). The performance indicators listed in the GRI framework have been widely used to measure and report on the economic, social and environmental performance of corporations. This is also known as 3P (people, planet and profit) or triple bottom line disclosure.

The results of a survey involving practitioners came up with a diverse array of corporate motivations for sustainability reporting practices. These include external motivation arising from external pressures on CSR related behavior, as well as internal motivations for improved sustainability management related practices at the organization level (Perez-Lopez, Moreno-Romero, & Barkemeyer 2013). For instance, external motivation includes (1) compliance to legal requirements and social norms, (2) transparency for stakeholders, (3) credibility and reputation management, (4) communication efforts and (5) obtaining operating licenses. Meanwhile, internal motivation covers: (1) risk management improvement, (2) identification of strategic opportunities, (3) resource allocation and cost reduction, (4) collaboration and process improvement within the organization, (5) employee motivation and (6) innovation and learning (Perez-Lopez, Moreno-Romero & Barkemeyer, 2013).

Previous research examined various kinds of determinants that lead to environmental disclosure quality or sustainability disclosure quality. Nevertheless, only corporate size and corporate visibility has been found to have consistently positive results in terms of environmental disclosure quality and sustainability disclosure quality (Hahn & Kühnen, 2013). Furthermore, less clarity exists from the institutional perspective when the pattern of corporate environmental reporting practices does not meet institutional expectations which is the harmonization of the reporting practice worldwide (KPMG, 2015). In reality, companies do not adopt uniform responses to institutional expectations as some

companies report their environmental information in great detail, whereas others disclose only limited information (Pedersen, Neergaard, Pedersen, & Gwozdz, 2013). Therefore, this paper will fill in the gaps by providing insights into the underlying mechanism of institutional deviance by recognizing the role of the internal behavioral governance mechanism in the interpretation of institutional pressures and their subsequent implication for organizational deviance in the quality aspect of environmental disclosure. The framework of this study contribute to corporate environmental reporting literature by highlighting the substitute effects of the internal governance (as the micro-level mechanism) and the external institution (as the macro-level mechanism) on improving the environmental disclosure quality.

2. Literature Review

2.1 Environmental Disclosure Quality

Corporate environmental reporting is one of the components of environmental accountability (Alrazi, de Villiers, & van Staden, 2015). Environmental reporting is a practice to measure, and then report to external and internal stakeholders on the organizational environmental performance in terms of its pursuit of sustainable development (Othman, Nath, & Laswad, 2018). There are various forms of environmental reporting ranging from inclusion in hardcopy annual reports, sustainability reports, as standalone reports or availability online (Wangombe, 2013).

There are various definitions of corporate environmental reporting. Wilmshurst & Frost (2000, p.16) define environmental reporting as; “those disclosures that relate to the impact company activities have on the physical or natural environment in which they operate”. Berthelot et al. (2003, p.2) define environmental reporting as, “the set of information items that relate to a firm’s past, current and future environmental management activities and performance. [It]...also comprises information about the past, current and future financial implications resulting from a firm’s environmental management decisions or actions.” Specifically, the environmental information disclosed should cover risky and uncertain environmental issues, such as climate change, biodiversity and water scarcity, which have a significant impact on the future performance and prospects of an organization (Iatridis, 2013).

Corporate environmental reporting implementation can be structured, based on environmental reporting guidelines or formulated independently. With the most comprehensive and influential reporting guidelines (GRI), the quality and inconsistency of environmental disclosure have improved tremendously (KPMG, 2015). With regard to the extent of environmental disclosure (volume of information) disclosure, environmental reporting is preferred by stakeholders because it covers the quality of corporate governance, company risk management, reputation and future financial prospects (Iatridis, 2013). This makes it more reliable and credible (Darus, Othman, & Arshad, 2014) because there are several quality reporting criteria that are included: (1) strategies, risks and opportunities, (2) materiality, (3) target setting and indicators, (4) suppliers and the value chain, (5) stakeholder engagement, (6) governance and (7) transparency and balance (KPMG, 2015).

Previous environmental reporting research on the determinants of the quality of disclosure has ranged from descriptive disclosure research to specific, quantifiable, and monetary data (Hahn & Kühnen, 2013). Among the determinants that have been researched are: (1) corporate size, (2) the board's characteristics, (3) financial performance, (4) ownership structure, (5) industry affiliations, country-of-origin, and legislative requirements, (6) board effectiveness and (7) corporate visibility. Moreover, high quality environmental disclosure has been proved to propel environmental innovation (Yin & Wang, 2018) and enhance company's investment recommendations (Al-Shaer, 2018).

In the Malaysian context, very little research has been carried out on the quality of environmental reporting based on GRI requirements (Jaffar, Adinehzadeh, & Rahman, 2015). Most of the previous research on the extent or levels of environmental disclosure has focused on a very narrow scope namely, the location of environmental disclosure in annual reports and environmental sub-themes (environmental preservation, environmental expenditures and investments, pollution abatement and environmental preservation). Hence, in the absence of specific environmental reporting guidelines, it is vital to improve the robustness, reliability, credibility and consistency of environmental disclosure. This leads to a call for further investigation into the role of the internal governance member in the environmental reporting process because they have the ultimate responsibility for dealing with the regulative pressures to disclosure environmental information. Therefore, this paper suggests that positive environmental deviance plays an important role in improving the quality of environmental disclosure.

2.2 Positive Environmental Deviance

Positive deviance describes individual and organizational behavior that deviates from the norm (rules that regulate and regularize behavior) of a reference group, is positive in terms of intention or effects and conforms to hyper norms, like they are not harmful to other groups or to society as a whole (Mertens & Recker, 2017; Mertens, Recker, Kohlborn, & Kummer, 2016). In corporate environmental management practices, positive deviance can be described as the strategic behavior of the corporation to improve the impact of environmentally sustainability practices beyond the required regulations and which, in turn, may lead to the elevation of the organization's and industry's norms associated with broader scale changes (Walls & Hoffman, 2013). Positive environmental deviance can be regarded as more sustainable corporate sustainability practices (Dossa & Kaeufer, 2014) and is related to more sustainable behavior which is appreciated, benevolent, caring, enduring, well positioned and reciprocal (Sadler-Smith, 2013). While normal environmental behaviors can be regarded as environmentally responsible sustainable corporate practices (Dossa & Kaeufer, 2014), they can also be related to less unsustainable behavior that still complies with the law, adheres to business norms and does what is required (Sadler-Smith, 2013).

Positive environmental deviance behavior is a business's strategic response that recognizes the importance of environmental responsibility in their business operations (Toppinen, Li, Tuppura, & Xiong, 2012). Furthermore, this proactive strategic response also involves voluntary practices to improve environmental performance (González-Benito & González-Benito, 2006). The companies that deviate positively in their environmental practices address environmental issues with sustainable solutions that require the coordination of various teams within the organization. These include the

environmental teams, engineering, production, marketing, and distribution managers (Albertini, 2013). They have also developed some specific environmental capabilities such as historical orientation, network embeddedness, endowments, managerial vision, top management skills and human resources (Walls, Phan, & Berrone, 2011). In addition, they always address the requirements of environmental regulation at any given time (Albertini, 2013). The potential impact of a company that deviates positively in their corporate environmental practice is examined on two levels: (1) environmental performance and (2) environmental capital expenditures or ECEs (Rodrigue, Magnan, & Cho, 2013). Environmental performance is measured as either regulatory or voluntary. Regulatory performance represents a reactive approach to corporate environmental management practices, while voluntary performance such as pollution prevention constitutes a proactive environmental strategy aiming to exceed compliance expectations (Walls & Hoffman, 2013). Environmental capital expenditures are measured regarding capital expenditure dedicated to pollution control and abatement and represents specific environmental management decisions based on their relevance to regulatory, strategic and financial purposes (Rodrigue et al., 2013), as well as represent a significant part of corporate environmental strategies and contribute to environmental performance management (Clarkson, et al., 2011).

Besides environmental performance and environmental capital expenditures, organizations that deviate positively in their corporate environmental management practices also emphasize internal motives for environmental reporting (internal practices of corporate environmental management practices) along with the external motives of environmental reporting (external communication of corporate environmental management practices) (Perez-Lopez et al., 2013). Perez-Lopez and colleagues (2013) found that focusing solely on external requirements does not guarantee any of the internal benefits frequently associated with environmental reporting. Previous studies revealed that companies which deviated positively in their corporate environmental management practices provided higher quality environmental reporting (Albertini, 2013; Walls et al., 2011). A company with a positive environmental deviance culture will increase their employees' environmental behavior and "spread" the positive environmental deviance behavior throughout the organization. As the positive environmental deviance may lead to improvement in the environmental disclosure quality, this relationship can be explained more clearly by studying the mechanism behind it.

2.3 Internal Governance Members' Environmental Experience

The board of directors and chief executive officer are crucial to understanding the connection between the organizational field and the organizational internal corporate governance (Rodrigue et al., 2013; Walls & Hoffman, 2013). Boards of directors and the chief executive officer are the keepers of knowledge and resources that can directly or indirectly affect corporate strategies through either board decisions or by forming board committees (Kim & Ozdemir, 2014). Recently, it has become normal for boards of directors and chief executive officer to oversee material sustainability issues that affect corporate performance. In fact, globally, large numbers of firms have set up dedicated board members to oversee sustainability related issues (KPMG, 2015).

Boards of directors and the chief executive officer interpret the institutional pressures based on the experience of its members and shape organizational responses based on

their interpretations (Walls & Hoffman, 2013). Some boards seek additional expertise by recruiting directors with environmental backgrounds while others steer their executives' behavior by incorporating environmental incentives into their executive compensation schemes (Rodrigue et al., 2013). It is argued that internal governance members have two functions that are complementary but which also create some tension. These include the monitoring of managerial decisions and control systems as well as providing resources, advice and counsel for management. The monitoring function encourages boards of directors to protect stakeholders, particularly shareholder interests by monitoring their managers' behavior while the advice function implies that board members shape and evaluate strategic decisions that will help facilitate access to the resources necessary for corporate success (Rodrigue et al., 2013). Walls and Hoffman (2013) argued that the board's participation in decision making relating to environmental sustainability is fitting due to possible problematic environmental issues which are often institutionally complex.

Environmental governance mechanisms which originated with the boards of directors and chief executive officer can be seen as two approaches (Rodrigue et al., 2013). The first approach is the substantive approach by which internal governance members implement environmental governance mechanisms to respond to stakeholders' environmental expectations, address environmental performance issues and monitor the firm's environmental performance. The second approach is symbolic and suggests that environmental governance mechanisms are merely symbols of an internal governance members' environmental involvement but lack any real influence on environmental investment decisions. Regardless of these approaches, all of these environmental governance mechanisms are influenced by the filter of the decision internal governance members' prior experience.

In view of the relationship between internal environmental governance mechanism and positive environmental deviance, Rodrigue et al. (2013) found that the existence of environmental committees, the proportion of environmentally aware directors on boards and the presence of environmental incentives as part of executive remuneration, all have a negative relationship with positive environmental deviance. These internal environmental governance mechanisms are basically symbolic and designed to manage stakeholders' perceptions of the corporate environmental management. This study argues that the inconsistency between these internal governance mechanisms and the quality of environmental reporting, as well as positive environmental deviance, may be attributable to the lack of research from the behavioral governance perspective.

2.4 Internal Governance Members' Environmental Experience

Previous studies revealed that environmental reporting was subjected to different levels of pressure which influenced the state of environmental disclosure quality (Wangombe, 2013). As the Malaysian publicly listed companies (PLCs) faced external pressures such as the mandatory requirement of the CSR framework instigated by Bursa Malaysia in 2007, it is worthwhile to examine environmental disclosure quality from the institutional perspective. According to seminal papers, the institutional context includes internal structures and external rules, such as public norms, environmental policies, environmental legislation and regulations (DiMaggio & Powell, 1983). Institutional theory underlines how organizations opt for certain behavior or practices such as environmental reporting through isomorphism. Therefore, institutional theory offers a possible lens through which to examine environmental disclosure quality.

Previous studies have also investigated the association between the extent of CSR disclosure and the organizational governance structure from the institutional perspective (Hahn & Kühnen, 2013). The study found that organizations with higher government ownership, more diverse and larger board sizes, and more independent board members, related positively to the extent of CSR disclosure. Amran et al. (2012) used institutional theory to explain the relationship between firm attributes, ownership structure, and business networks and climate change mitigation efforts, whereby company size, profitability, industry membership, government ownership and business networks were found to be positively related to environmentally related practices. Institutional theory explained the importance of regulatory, normative and cognitive pressures that influence an organization to adopt specific organizational structures and practices.

As an extension to those two studies (Amran et al., 2012; Ntim & Soobaroyen, 2013), this study employed institutional theory to investigate the role of internal governance mechanisms, rather than the institutional context, to examine the differences in organizational responses. This study adopted the idea from Walls and Hoffman (2013) to explain why some organizations deviate from institutional norms to improve their environmental management practices at the company level. With this kind of positive environmental behavior, companies emphasize the technical and organizational elements that would be needed to integrate corporate environmental reporting practices into corporate environmental management practices rather than focusing solely on the external motivation of CER (Perez-Lopez et al., 2013).

2.5 Proposition Development

Not without its critics, CSR practice has been gaining momentum steadily over the years. Many governments have implemented mandatory CSR disclosure requirements. For instance, all PLCs in Malaysia are required to disclose CSR information in their annual reports (Bursa Malaysia, 2007). Since then, the number of Malaysian companies disclosing their environmental information has increased tremendously due to this mandatory stock exchange requirement (KPMG, 2015). Observations indicate that the information disclosed is in a heterogeneous manner and reveals company responses to institutional pressure in various ways (KPMG, 2015).

Variation and inconsistency of environmental information disclosed by Malaysian companies have been highlighted by several researchers. Their research found that information disclosed was incomplete or not particularly comprehensive and was largely confined to general, narrative statements which could not be verified (Othman, Darus & Arshad, 2011; Ahmad & Mohamad, 2013; Darus, et al., 2013). Most of the environmental information reported was merely drawn up to meet the Bursa Malaysia reporting requirements, and not due to the strategic value of disclosure (ACCA, 2013). Besides, some of the companies obtained independent third-party assurance for their environmental reports (ACCA, 2013; Yam, 2013), whereas others opted for voluntary standard assessment systems such as GRI, Sustainability Reporting Guidelines and GRI Application Level Checks for their corporate environmental reporting practices (Alazzani & Wan-Hussin, 2013; Samuel, Agamuthu, & Hashim, 2013). Conversely, other companies went the extra mile to disclose their business carbon footprint and climate change business strategy (Kweh, Alrazi, Chan, Abdullah, & Lee, 2017).

Hence, corporate environmental reporting practices in Malaysian companies raised questions as to whether the diversity and inconsistency is attributable to the institutional deviance which makes some of them deviate from institutional norms (Hoffman & Georg, 2013). This confirms institutional pressures by the uncoupling of their core activities from the practices and procedures forced upon them externally (Marquis & Toffel, 2013) or proving that institutional pressures led to the improvement of their environmental sustainability management practices at the company level, beyond what is required by the regulations (Walls & Hoffman, 2013).

As such, various institutional pressures lead companies to behave in a tokenistic and substantive manner in their corporate environmental reporting practices, hence, there is a critical need to examine environmental disclosure quality based on the criteria that reflect the companies' strategic approach toward institutional pressures (Rupley, Brown, & Marshall, 2012).

One of the possible avenues to understand this kind of institutional deviance is by identifying a company's strategic approach towards institutional pressures (Scott, 2008; Walls & Hoffman, 2013). Normally, the strategic approach stems from external motivation which focuses on the external communication of sustainability related information (Perez-Lopez et al., 2013). Nevertheless, a recent study called for an investigation pertaining to institutional pressure which stems from internal motivation, and relates to the improvement of sustainability related practices internally (Perez-Lopez et al., 2013).

The organization's strategic approach to institutional pressure is closely related to the internal governance mechanism of the organization. Hence, CER should be assessed from the internal strategic perspective, as the board of directors governs the company operations through corporate disclosure practices and risk management processes (Ben-Amar & McIlkenny, 2014).

From the managerial perspective, decision makers always respond strategically to the external institutional context (Walls & Hoffman, 2013) which involves experience (Snook, 2000). Therefore, a board of directors and chief executive may influence the environmental reporting practices of an organization, through their cognitive influence, as this internal governance mechanism helps them to interpret the institutional pressure, based on their skills and experiences (Walls & Hoffman, 2013). Previous studies which focused on the structure and characteristics of the internal governance mechanism for the improvement of environmental disclosure quality or sustainability disclosure quality (Ben-Amar & McIlkenny, 2015), fall short in providing a consistent result for the link between internal governance mechanism and environmental disclosure quality. This provides more opportunities for the internal behavioral mechanism to explain the relationship. Since previous research has revealed the inconsistency of the relationship between various kinds of determinants of environmental disclosure quality (financial performance, ownership structure, sector affiliation, country-of-origin and legal requirements, board effectiveness, board characteristics), apart from corporate size and corporate visibility, it is necessary to scrutinize the internal behavioral governance mechanism as a determinant of environmental disclosure quality.

The environmental experience of the board of directors and chief executive officer enables a company to deviate positively from institutional norms (Walls & Berrone, 2015; Walls & Hoffman, 2013) in environmental disclosure quality by disclosing the results of their improvement in pollution control and abatement, environmental management decisions related to their relevance for regulatory, strategic, and financial purposes (Rodrigue et al., 2013). Moreover, the presence of positive environmental deviance through the corporate environmental governance mechanism and the intensity of environmental capital expenditures (Rodrigue et al., 2013), as well as a proactive environmental strategy (Jaaffar & Amran, 2017) has led to openness, comparability and sufficient transparency of environmental and social performance which are the key principles today. By contrast, without positive environmental deviance in a corporate environmental governance mechanism and intensity of environmental capital expenditure, which show substantial investment and a long term commitment to the environment, companies may not reach a level expected of positively environmental deviated companies since is not easy, risk-free or without cost (Toppinen & Korhonen-Kurki, 2013). This positively deviated company will signal its exceptional environmental efforts and increase the transparency of its reports. This will lead to an improvement in the quality of their environmental disclosure (Clarkson, et al., 2013). Hence the following propositions are suggested:

Proposition 1: The cognitive influence of an internal governance members' environmental experience will be positively related to positive environmental deviance.

Proposition 2: Positive environmental deviance will positively relate to environmental disclosure quality.

Proposition 3: Without the mediating effect of positive environmental deviance, the relationship between the cognitive influences of an internal governance members' environmental experience will not significantly relate to environmental disclosure quality.

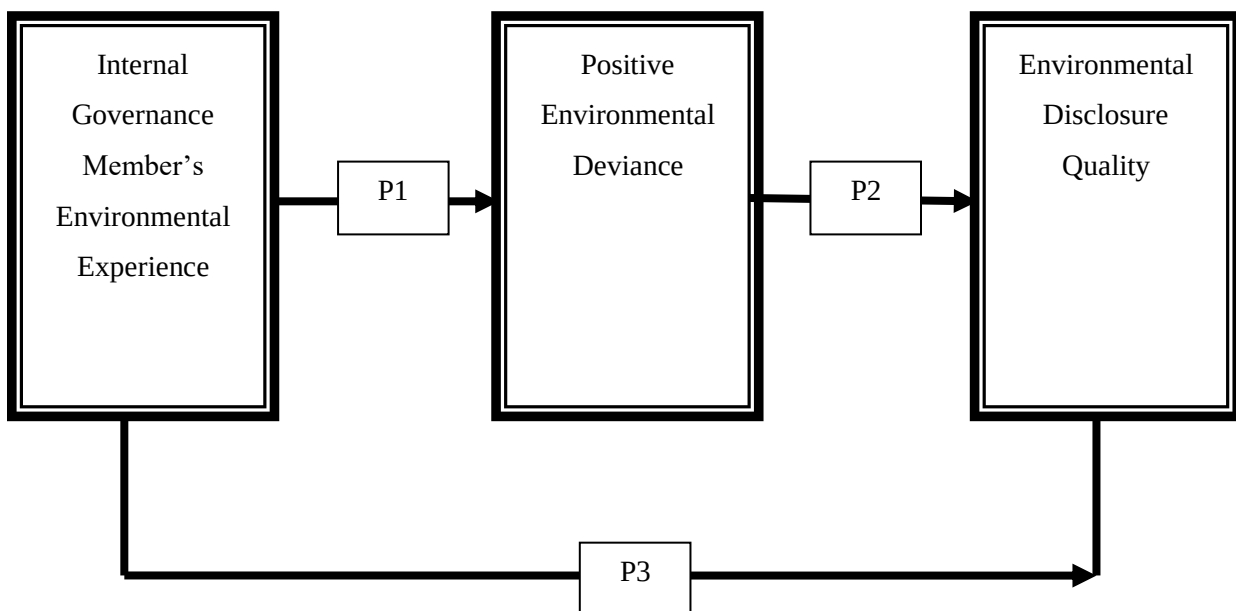


Figure 1 Depicts the Proposed Model and the Relationships between the Variables

3. Conclusion

This paper presents a conceptual framework that describes the relationship between an internal behavioral governance mechanism, positive environmental deviance and environmental disclosure quality. This paper proposed that an internal behavioral governance mechanism would have a positive influence on positive environmental deviance which in turn would lead to better environmental disclosure practices.

The importance of positive environmental deviance is significant to understanding the connection of an internal governance members' environmental experience with environmental disclosure quality. An internal governance members' environmental experience has the potential to drive positive environmental deviance, which could be attributed to proactive strategic responses that recognize the importance of environmental responsibility related issues in the overall business operation. This could ultimately lead to the improvement of environmental disclosure quality. Moreover, the proposed framework is in line with institutional theory which presumes that the presence of institutional pressures, in this context the internal behavioral governance mechanism, could lead to proactive strategic responses based on environmental responsibility, and thereby increase the quality of organizational environmental disclosures.

Lastly, if the empirical findings were found to be supportive, then, the findings can assist practitioners and policy makers to make appropriate decisions and take necessary steps to enhance positive environmental deviance, which in turn will lead to better environmental disclosure quality. Ultimately, this may assist companies to survive in this highly competitive business environment.

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The Impact of Malaysian Ringgit Fluctuation towards Profitability of Islamic Banks in Malaysia

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Abstract

Profitability of a bank mostly relies on its financial performance as the ability to leverage operational, investment decisions and strategies to achieve a business financial constancy. This study is devoted to examine the selected Malaysian Ringgit factors that bring impact to the profitability of local Islamic banks in Malaysia. A set of data were obtained from each bank's financial statement and the World Bank data from year 2007 until 2016. Return on assets has been used as a dependent variable while debt to equity ratio, capital adequacy ratio, exchange rate and interest rate serve as an independent variable. The findings show that three independent variables give positive significant relationship and will be discussed further throughout the paper. For that purpose, policymakers should focus on these three variables for standardizing the economic environment to all local Islamic banks operating in this country.

Keywords: Bank's profitability, Ringgit fluctuation, Debt to equity ratio, Capital adequacy, Exchange rate, Interest rate.

1. Introduction

Malaysia is well-known for its highly progressive and attractive Islamic financial sector as it has grown substantially by demonstrating a high level of profitability and is less affected by the global economic downturn (Muhamad & Yameen 2013). Islamic financial system aims to create an environment where Muslims could involve in financial and banking activities without any uncertainty that is against the religion (Parviz, 2009). In Malaysia, Islamic banking system was fully established with the Enactment of Islamic Banking Act 1983. Aligned with that, Bank Islam Malaysia Berhad was set up and regulated by Bank Negara Malaysia under the Islamic Banking Act 1983 as the first Malaysian Islamic bank. Other than that, commercial banks, merchant banks and finance companies are also allowed to offer Islamic banking products and services under the Islamic Banking Scheme. Currently, there are over 300 Islamic financial institutions across 75 countries around the world.

In different international currency markets and volatile exchange rates, most international trades are operated by major foreign currencies such as US Dollar, Japanese Yen, and others. In Malaysia, Bank Negara Malaysia is the sole authority in issuing the national currency known as Ringgit Malaysia which was officially published in 1967. However,

when the Asian financial crisis took place in 1997, the Malaysian Ringgit became a victim when both the pre-crisis and crisis periods led to volatile stock prices and ringgit exchange rates over the years (Zubair, 2002).

Due to this tragedy, Bank Negara Malaysia decided to set the ringgit value at RM3.80 against the US dollar. After the crisis, Ringgit Malaysia was pegged to almost seven years before it started to lower its value to RM4.0025 against the lowest dollar in 17 years. Therefore, this study aims to assess the impact of Ringgit Malaysia's fluctuations on the profits of local Islamic banks in Malaysia by measuring its debt to equity, capital adequacy, exchange rate (RM / US dollar) and interest rates. Measuring the profitability in terms of return on assets (ROA) is done by using banks specific variables.

2. Literature Review

Previous studies conducted by Hassan and Bashir (2003) discussed Return on Assets (ROA) and Return on Equity (ROE) as the overall performance measures of Islamic banking. They point out that asset returns can reflect the management's ability to use bank financial and investment resources to generate profits. Another study by Elizabeth (2015), examined the positive impact of currency fluctuations on financial performance of commercial banks in Kenya by using asset returns as dependent variables. Debt to equity ratio was used to analyze the financial position of the bank, thus affecting the performance of the bank. Leong, Liew, Mah, Tan and Yew (2013) found that the debt equity ratio has a significant relationship with the profitability of the bank. On debt to equity results, it was agreed upon by Husni (2011) who saw a significant positive and significant relationship between profit and debt to the equity ratio. Meanwhile, the results of the study conducted by Yogendrajah and Thanabalasingam (2011) are contradictory as profit margins and debt to equity are positive but not insignificant.

The capital adequacy ratio is a valuable tool for assessing the security and soundness of the bank. Some researchers point out that a bank with a high capital ratio or more equity capital indicates more bank security and is the advantage of gaining higher profits (Vong & Chan, 2009). A study on the effects of foreign exchange fluctuations and commercial bank profits in Nigeria was done by Amenawo, Hodo and Emmanuel (2016). The study focused on the relative impact on bank profits by using four features of the bank as an independent variable comprising bank size, bank divestment, non-performing loans and capital adequacy ratios. Ahmad (2017) also found that the results of the study show that the capital ratio, other operating income, GDP for each capital, bank size and concentration and oil prices have affected the Islamic bank positively. A lot of research conducted for commercial banks also leads to positive relationships with asset returns, indicating that the increase in bank capital adequacy will lead to an increase in return on assets (Stephen et al., 2014; Pasiouras & Kosmidou, 2007). In the previous studies, the exchange rate as a determinant of Islamic bank capability had a significant impact on its performance compared to conventional banking systems. Given the currency market to determine the exchange rate, there are some transactions that take place in conventional markets that are not suitable for Islamic trading systems which include swap, futures, options and forward contracts. The profitability of Islamic banks is not directly affected by the exchange rate but variations in the prices of the goods affect the business efficiency and profitability.

Yang and Zeng (2014) defined it as “the exchange rate measures the relative price of non-tradable goods in terms of tradable goods”. In a study conducted by Nahar and Sarker (2016), exchange rates negatively affect the ability of Islamic bank financing. It is also supported by Elizabeth (2015) who claimed that a negative correlation exists between exchange rate fluctuation and the profitability measured by asset ratio returns. The negative outcomes also show inconsistency with a study conducted by Javaid and Alalawi (2017) which revealed that the exchange rate along with other macroeconomic variables is significant in determining the profitability of Saudi Arabian banks. However, a study by Iriani and Yuliadi (2015) contradicts the findings and found that the impact of macrovariables on non-performance financing of Islamic banks in Indonesia shows that exchange rate has a positive impact the nonperforming financing. Likewise, Habib and Islam (2017) also found that Islamic banks’ stock market were significantly influenced due to interest and exchange rate in India. It is also supported by Carolyn and Daniel (2016) where exchange rate fluctuations positively and significantly affect the bank’s performance in Nigeria. Further research results agree with the findings that exchange rates have a positive significant effect towards the return on assets.

High inflation rates are generally linked to high interest rates on loans, and therefore higher revenues. When interest rates increase, deposits are more attractive while investments are less, and bank pays more to their saving accounts. On the other hand, high interest rates will impede borrowings as consumers will have to pay a high monthly fee. As a result, loan defaults increase and it directly affects the profitability of the bank.

For Islamic banks, it does not charge fixed rate on their deposits or loan transactions, so inflation may be a factor in the cause’s variations on bank’s ability. Hence, the higher the interest rate, the higher bank profitability through lower capital and lending, then inflation is expected to have a positive impact on bank’s profits. Referring to a study done in Nigeria by Obamuyi (2013), bank lending rates directly affect the bank’s income and expenses, and net revenue affects profitability. Research found that interest rates have a positive impact that would affect the return on assets.

3. Results and Discussion

The research approach is to observe the impact of Ringgit Malaysia’s fluctuation on local Islamic banks in Malaysia, covering a 10-year period from 2007 to 2016 using secondary data. To determine the most significant variables, this study has resulted in a financial ratio of profitability ratio, efficiency ratio, liquidity ratio, bank size and tax. In analyzing all data, STATA software has been used as a sampling technique to run multiple regression analysis (multicollinearity). Annual data were collected from the financial statements and annual reports of 10 banks as well as Bank Negara Malaysia. Up to 100 observations were used for this investigation. The correlation between dependent and independent variables was also tested to determine the relationship between each variable. In this study also, causal study was selected to measure the effect of the effects upon changes in the incident. It involved one or more of the factors that are the cause of the problems.

The research covered four independent variables that reflect the size of the bank’s profits on local Islamic banks in Malaysia. Variables focus on debt to equity ratio, capital adequacy ratio, exchange rate, and interest rate.

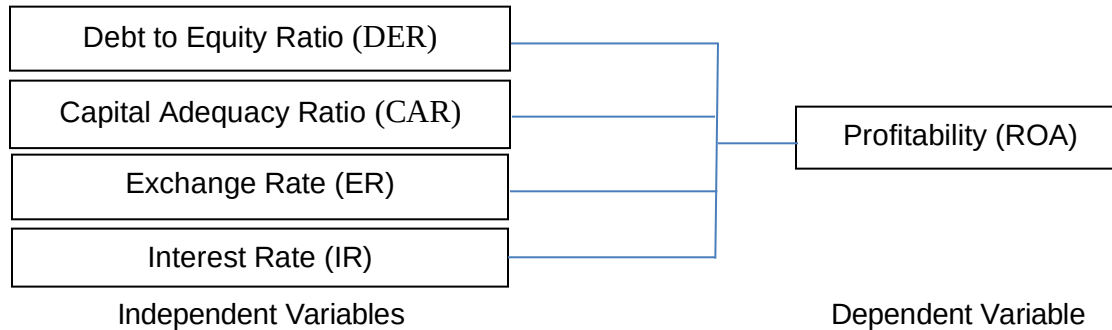


Figure 1 Research Framework

Table 1 Descriptive Statistics

Variables	Mean	Sd Deviation	Min	Max
Profitability	1.869059	0.9652378	0	3.82280
Debt to equity ratio	12.02789	6.403012	0	30.3759
Capital adequacy ratio	13.25462	7.0668690	0	60.8100
Exchange rates	3.41454	0.3418696	3.06	4.1483
Interest rates	3.03000	0.9780779	0	4.2700

Table 2 Correlation Statistics

	Profitability	Debt to equity ratio	Capital adequacy ratio	Exchange rates	Interest rates
Profitability	1.000000				
Debt to eq ratio	0.3870	1.000000			
Cap adq ratio	0.5321	0.3224	1.000000		
Exch rates	-0.0776	-0.0075	0.0478	1.000000	
Interest rates	0.6116	0.4914	0.5874	0.0223	1.000000

To analyze the results of the study, first it is useful to comment on some preliminary features of the data. Table 1 shows descriptive statistics for the profitability and the four variables used in the model. The mean of all other independent variables is positive. The mean of capital adequacy ratio is the largest (13.25) and varies greatly across variables (max = 60.81 and min = 3.06).

Table 2 shows the correlation among variables. The findings indicate that only exchange rates give negative relationship with profitability by -0.0776, while the other independent variables have positive relationship with profitability by 0.3870, 0.5321, and 0.6116. Overall, the correlation statistic result brings no multicollinearity problem in obtaining the data because the value is 1.42 which is not more than 5 between independent variables.

Table 3 Regression Analysis

Source	SS	df	MS	Number of obs = 100		
Model	40.3328808	4	10.0832202	F(4, 95) = 18.46		
Residual	51.9038305	95	.54635611	Prob > F = 0.0000		
				R-squared = 0.4373		
				Adj R-squared = 0.4136		
Total	92.2367113	99	.931683952	Root MSE = .73916		

roa	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
der	.0150533	.0133404	1.13	0.262	-.0114308	.0415373
car	.0360652	.0130173	2.77	0.007	.0102226	.0619077
er	-.2784264	.2176133	-1.28	0.204	-.7104434	.1535906
ir	.4041926	.1021253	3.96	0.000	.2014484	.6069369
_cons	.9359641	.7775484	1.20	0.232	-.6076647	2.479593

This section shows the regression analysis of Islamic bank's profitability and its variables. The model shows the relationship between dependent variable and independent variables. The result illustrates that the dependent variable has significant relationship with the independent variables at p-value 0.0000 which is less than 0.00 level of significance. The R-squared valued 0.4373 or 43.73% of the variable changes means return on assets can be explained by all independent variables while another 56.27% is unexplained. Adjusted R-squared equals to 0.4136 means 41.36% of the variation in return on assets can be explained by the variation of independent variables. Out of four independent variables, two variables are significant. Capital adequacy ratio and interest rates show a significant indicator at 0.01 level of significance and has positive relationship with the dependent variable.

Debt to equity ratio shows 1.50533% increase in return on assets which leads to positive but insignificant relationship. The result is also similar to Yogendrajah and Thanabalasingam (2011) who indicated that profitability is not strongly positive with the capital structure measured by the debt to equity ratio. This is because using more debt will lead to increase in required rate of return and it will give negative impact towards the probability of the firms. However, the result conflicts with the studies by Leong et.al. (2013) and Husni (2011) who stated that there is significant relationship between debt to equity ratio and the return on assets. Both findings show that loan loss provision is heavily dependent on the bank's performance. Increase in loan loss will lead to the increase debt to equity ratio, thus indirectly may affect the bank's profitability.

For capital adequacy ratio, it shows 3.360652% increase in return on assets which is found to be similar with Pasiouras and Kosmidou (2007) and Stephen et al. (2014). The result for exchange rate gives insignificant relationship with the bank's profitability where it decreases by 27.84264% and this is supported by Elizabeth (2015). Fluctuation of the exchange rate has negatively influenced the economy by making the cost of living more expensive. For instance, the banks are exposed to the exchange risk since the country or the bank itself heavily relies on the import activities. However, this is contrary to other studies done by Carolyn and Daniel (2016) who stated that the fluctuating and volatility of exchange rate may contribute to the growth of profitability banks. This happens when many imports are bought and paid by the locals using the dollars instead of Malaysian

Ringgit. When the Malaysian Ringgit is weakening against the dollar, the banks are making an arbitrage profit. Besides, interest rate gives positive significant relationship with the return on assets increased by 40.41926%. This finding is similar to Obamuyi (2013) that the higher the interest rate will benefit the banks in term of higher profit.

Table 4 Random Effect Result

Random-effects GLS regression

Group variable: **code**

Number of obs = 100

Number of groups = 10

R-sq: within = 0.5083

between = 0.2845

overall = 0.4011

obs per group: min = 10

avg = 10.0

max = 10

Random effects u_i ~ Gaussian

corr(u_i, X) = 0 (assumed)

wald chi2(4) = 85.13

Prob > chi2 = 0.0000

roa	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
der	.0433484	.0115646	3.75	0.000	.0206822	.0660145
car	.0311148	.0105273	2.96	0.003	.0104817	.0517479
er	-.258925	.1673665	-1.55	0.122	-.5869573	.0691072
ir	.2373688	.0826228	2.87	0.004	.075431	.3993066
_cons	1.100137	.6123508	1.80	0.072	-.100048	2.300323

sigma_u .32453677

sigma_e .52695878

rho .27499075 (fraction of variance due to u_i)

From the above result, the overall R-squared value is 0.4011 which indicates that 40.11% of the total variation in the level return on assets for local Islamic banks in Malaysia occurs because of the variation in debt to equity ratio (DER), capital adequacy ratio (CAR), exchange rate (ER) and interest rate (IR). The remaining 59.89% might be due to the randomness or other variables.

4. Conclusions

The aim of this study is to examine the impact of Malaysia Ringgit fluctuations on the profitability of local Islamic banks in Malaysia by measuring its debt to equity, capital adequacy, exchange rate (RM/ US dollar) and interest rate. Measuring the profitability in terms of return on assets (ROA) was done by using banks specific variables during the period of 10 years starting from 2007 until 2016 by applying the panel data (random effect model).

Firstly, the study concludes that the debt to equity has a positive but insignificant impact to the return on assets of the local Islamic banks. This indicates that using more debt will lead to increased rate of return of the banks and it will give negative impact towards the profitability of the banks. The debt to equity ratio indicates how much the firm or banks are using its assets relative to the amount represented in shareholder's equity.

Secondly, there is a positive and significant relationship between capital adequacy ratio and the bank's profitability. The capital adequacy is a minimum capital required by a

banking institution to ensure that the bank has enough capital on account to meet obligations and absorb any unexpected losses. A rise of capital adequacy ratio results in reduction of bank profitability and vice versa.

Thirdly, the study concludes that the exchange rate has a negative and insignificant relationship with the profitability of local Islamic banks in Malaysia. Moreover, the Ringgit Malaysia exchange rate against the US dollar was observed during the period of study. As the value of Ringgit Malaysia decreases against US dollar, it will lead to negative and significant impacts towards the return on assets of local Islamic banks in Malaysia.

Finally, the results of this study suggest a positive significant relationship between interest rate and the return on assets of the local Islamic banks in Malaysia. This indicates that the interest rate has influenced the profitability of the banks in positive impact. A rise of interest rate will cause the banks to earn more income or profit.

The proceeding empirical analysis allows us to shed some light on the relationship between bank characteristics as well as industry and macroeconomic indicators, and profitability of Islamic banks in Malaysia. From the research findings, recommendations can be given with regards to policy and practice in banking sector. As a matter of policy implications, there is a need to draw several proposals at the bank level which shows that size of the bank has a significant impact on the performance of Islamic banks. Consequently, Islamic banks in Malaysia should focus more on expanding the banks to achieve full benefits of economies of scale. For policymaker, they should standardize the economic environment to all local Islamic banks operating in this country. In addition, the regulator also has an important role to ensure and to safeguard the value of domestic currency as well as the needs to implement efficient monetary and fiscal policies as to help any deficit balance of payment caused by the strong currency fluctuation. Islamic banks should also focus on predicting forthcoming inflation in the country. The capability of the banks to forecast future inflation helps banks to determine its interest rate above the inflation. However, when considering that Islamic finance does not deal with interest rates, it could be assumed that forecasting and predicting the inflation rate could help the bank in making decisions with regards to the rate of profit sharing, loan quantity and asset quality.

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The Impact of Job Rotation towards Motivation of Nurses in Private Medical Institution in Malaysia

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Abstract

Job rotation is one of the excellent tools in on job training. This study attempts to examine the impact of job rotation towards motivation of nurses in private medical institutions. Among the three important outcomes of job rotation investigated further in this study are reducing stress, acquiring knowledge and skills as well as improving level of social interaction. Data was collected from 150 nurses in one established private medical institution in Melaka. Findings from this survey support three hypotheses: First, there is positive relationship between knowledge and skill acquired through job rotation that develops motivation of employees. Second, there is a positive relationship between increasing social interaction toward motivation of nurses. Third, there is no relationship between reducing stress towards motivation of nurses. This study is only limited to healthcare setting context. Further research should be conducted in different fields and examine different issues to investigate other impacts of job rotation on employees.

Keywords: Job rotation, motivation, employee performance.

1. Introduction

Well-being oriented HRM practices is a design to promote investment in employees (eg: training, development, and learning). Job rotation refers to a professional job cross training plan that helps employees expand their job territory while broadening their working experience and skills, stimulating their working spirit and cultivating their interpersonal relationships by shifting personnel to different departments or units of the same department (Wen, Ching, Ying & Rong, 2009). It is widely acknowledged that nurses are critical components in any healthcare organization. The workforce in the health sector including nurses has specific features that cannot be ignored, and motivation can play an integral role in many of the compelling challenges facing healthcare today (Plowman. N., 2010).

1.1 Research Problem

A nurse's professional skills and training will contribute significantly to successful patient outcomes in a variety of care setting (Ronda, 2008). Upgrading the knowledge and skills of nurses, equipping them with the specific skills and enhancing training culture are one of the important goals to be accomplished by any healthcare organization (Ronda, 2008). This is because they deal with patients every day.

1.2 Research Objectives

The objectives of this study are:

1. To identify the impact of reducing stress towards motivation of nurses.
2. To examine how the level of knowledge, skills and ability can influence motivation of employees.
3. To investigate the impact of social interaction towards employee's motivation

2.0 Literature Review

Almost every organization spends a huge amount of money on training activities, whether for technical, managerial or personnel development, in order to enhance the motivation level of their employees. One excellent job training tool is job rotation. Job rotation is defined as systematic movement of employees from one job task to another at planned intervals (Dessler & Varkkey, 2009; Malinski, 2002). There are various impacts of the job rotation like reducing stress, increasing knowledge, ability or skill and also increasing in social interaction.

Job rotation has come to be accepted as an effective method of developing skills and providing motivation (Friedrich & Kabst, 1998). It is a job design method which can enhance motivation in order to develop views and double productivity in humanized resources and to improve organization performance and individual levels by multi-skilled workers, well applied available capacities and providing new horizons for attitude, thought, capabilities and skills of workers (Soltani, 2000). Moreover, job rotation is a planned replacement of employees among jobs in a period of time for one or more goals of earning skills and job independence; increase motivation; job performance; and productivity (Bennett, 2003).

According to Shahin and Badri (2013), job rotation is a job design method which is able to enhance motivation, to develop views and double productivity in humanized resources and to improve organization performance in organizational and individual levels by multi-skilled workers, well applied available capacities and providing new horizons for attitude, thought, capabilities and skills of workers. Working with many people at different time periods, develop human relations and support internal and external communication among departments is also the benefit of job rotation that influences motivation. Rotation gives several cues about how to establish communication with people with different behavioral characteristics (Kaymaz, 2010). This opinion has been supported by Morris (1956) who stated that employees who are closer to each other in a social context will be able to resolve any problems which may arise during technical processes more easily.

3.0 Methodology

3.1 Sample and Procedure

The data for this study were drawn from a survey conducted in one of the private medical institutions in Melaka, Malaysia. This institution was chosen since it is an establish one with a large number of nurses. Data were randomly collected from 150 nurses. The questionnaire designed by the research team had gone through a pilot test to ensure validity and reliability. All 150 questionnaires were successfully returned and were analyzed using SPSS 20.

4.0 Findings and Analysis

4.1 Reducing Stress

Table 4.1 Coefficients

Model	(Unstandardized Coefficient) <i>B</i>	Std.Error	(Standardized Coefficients) <i>Beta</i>	t	Sig.
1 (Constant)	3.172	.531		5.977	.000
Mean_IV1	.242	.140	.232	1.723	.091

a. Dependent Variable: Mean_DV

Table 1 indicates the level between reducing stress and motivation of employees. As indicated in the table, the p-value of variables was more than $p < 0.05$. This directly reflected that reducing stress has no influence on employee motivations. Hence, it clearly shows a lower relationship with employee's motivation.

4.2 Examine Level between Increasing Knowledge, Skills and Ability

Table 4.2 ANOVA_a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	2.457	1	2.457	15.175	.000 _b
Residual	8.418	52	.162		
Total	10.874	53			

a. Dependent Variable: Mean_DV

b. Predictors: (Constant), Mean_IV2

Table 4.2 depicts that the F value in ANOVA model indicated the F-statistics and p-values was ($F = 15.175$, $p = .000_b$) and not more than alpha value of 0.05. From the analysis, researcher can conclude that, increasing knowledge, skills and ability significantly contributed towards employee motivation among the nurses. Due to that, this variable would influence the motivation of employees in performing job rotation.

4.3 Coefficients for Increasing Knowledge, Skills and Ability

Table 4.3 Coefficients

Model	(Unstandardized Coefficient) <i>B</i>	Std.Error	(Standardized Coefficients) <i>Beta</i>	t	Sig.
1 (Constant)	2.260	.471		4.802	.000
Mean_IV2	.443	.114	.475	3.895	.000

a. Dependent Variable: Mean_DV

Based on table 4.3, there is correlation between increasing knowledge, skills and ability toward motivation of employees. As indicated in the table, the p-value of variables was not more than $p < 0.05$. Therefore, it clearly shows a strong positive influence. This is because applying job rotation in their work motivated the employees and improved their work performance.

4.4 Level of Social Interaction towards Employee Motivation

Table 4.4 Coefficients

Model	(Unstandardized Coefficient) <i>B</i>	Std.Error	(Standardized Coefficients) <i>Beta</i>	t	Sig.
1 (Constant)	1.614	.406		3.972	.000
Mean_IV3	.621	.102	.647	6.112	.000

a. Dependent Variable: Mean_DV

Based on table 4.4, there is some influence between increasing social interaction and motivation of employees. As indicated in the table, the p-value of variables was not more than $p < 0.05$. This directly reflected that increasing social interaction have significant relations to employee motivations. Therefore, it clearly shows a positive level of influences. Thus, it can be concluded that most of the employees will increase their interaction with others while performing job rotation.

5.0 Conclusion and Recommendations

5.1 Conclusion

Based on the results of the study, it can be explained the impact of job rotations towards motivation among nurses at UTM's Health Centre was based on three independent variables that are being discussed which include reducing stress, increasing knowledge, skill and ability and the last independent variable is increasing social interaction. The study documented a weak and positive impact of job rotation on employee commitment. Majority of the respondents agreed that by applying job rotation in their work, it can increase their knowledge, skills and ability.

While majority of the respondents in this study provided positive feedback towards increasing knowledge, skills, ability and interaction, most of them agreed that job rotation did not help them in reducing stress level. The reason for this negative relationship might be the excessive work pressure. The additional task that they need to perform might affect their performance. Job rotation involves periodic shifting of employees from one task to

another where each of tasks requires different skills and responsibilities (Faizan Mohsan, Muhammad Musarrat Nawaz & Khan, 2012). Thus, it can be concluded that there is no relationship between reducing stress and motivation of employees.

In order to reduce the level of stress among employees, they need to ensure the time management that they are practicing is good. Apart from that, setting clear objectives can minimize the effects of ambiguity and conflict. Only two independent variables have a positive influence towards employee's motivation. However, for the third independent variable which is reducing stress, clearly did not influence the employees' motivation level.

5.2 Recommendations

The organization should provide optimum training so that it can help the employees build upon the skills learned at each step of a job rotation. Other than that, top management of the organization should ensure that the steps in a job rotation should be measurable and made open to each other. For example, written documentation about various aspects of each job is helpful to reduce the employees' learning curve in job rotation. To boost motivation of employees, the organization should make some additional compensation as employees learn new or more difficult jobs in a job rotation.

Based on the findings of this research, it is recommended for future researchers to increase the number of respondents. As the number of respondents is increased, it can help the researcher to have more reliable of the data analysis. Apart from that, it may be more efficient to determine the respondents by calling each department before selecting them. This can help the researcher to obtain a more accurate result.

Although the questionnaire in this study showed adequate reliability, future researchers can apply different measurements to ensure that it can easily detect the expected effect. Therefore, future research may consider the development of more reliable measures for examining such as interview and observation. The researcher also recommends future researchers to do more research in the private sector. This is because, it can give different result as the number of respondents will be slightly different.

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The Influence of Social Media Marketing Activities on Brand Equity

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Abstract

There are new ways which have been made available for companies and brands to market their products and services with the existence of social media. However, there is insufficient evidence on how the social media marketing activities may influence brand equity, particularly brand awareness, especially in Malaysia. This study is carried out in order to investigate the influence of social media marketing activities on brand awareness. It has adapted framework from previous research by classifying social media marketing activities as entertainment, customization, trendiness, and perceived risk. The questionnaires were distributed online through Facebook to 110 respondents who follow Company A's social media page. The results indicate that all four independent variables significantly influence brand awareness.

Keywords: Brand equity, Brand awareness, Social media, Marketing activities, Interaction, Trendiness.

1. Introduction

Nowadays, people interact with each other in various possible ways that they do not rely solely on real time connection only. This is due to the accessibility of social media as a platform to stay connected and share news or updates with their friends. Social media has made finding information and purchasing items by using traditional method irrelevant, and intrinsically, it has generated new social and economic consequences (Seo and Park, 2018). Social media-based marketing has also received a lot of attention due to the fact that the recall rates are 2.9 times higher than Nielsen's norm for online advertising (hootsuite.com, 2016). This can be further elaborated as the developments in the business world have been seen to manipulate the function of social media to become one of the most essential tools for marketing strategy especially for brand health and brand development (Ahmad, Musa and Harun, 2016).

Huang and Beyouncef (2013) state that social commerce has been adopted by more than 88 percent of businesses across various industries to improve the social media marketing of their e-commerce platform. This is because firms are surrounded by

various social media websites like Facebook, Twitter, Instagram and LinkedIn to make sure that they are able to reach the intended customers for them to have an influence on brand equity.

Other than that, Valkenberg and Bujizen (2005) mention that brand awareness is usually referred to as an active and passive knowledge that an individual possesses. This is in reference to any particular brand. To be more specific, individuals have the ability to name a specific brand without hesitation when they are given a category cue if they are fully aware of it. Due to the ambiguity of brand categorization, customers in Malaysia have difficulty in registering Malaysian brands, leading to lower levels of overall brand equity and brand awareness (Tan, Ismail & Devinaga, 2015). Therefore, it can be derived that social media marketing activities and brand awareness are areas that need to be studied in order to know the relation between those two. Thus, this study is conducted to learn the influence of social media marketing activities on brand awareness based on a case study of Company A, a payment gateway provider.

2. Literature Review

2.1 Brand Equity and Brand Awareness

According to Seo and Park (2018), brand equity is referred to the net consequences of assets and debts related to brand name and/or symbol. Likewise, the concept 'customer-based brand equity' can be segregated into brand awareness and brand image (Seo and Park, 2018). In the same vein, Macdonald and Sharp (2003) view brand awareness as the ability of a person to recognize and memorize the brand in a given situation. With the presence of brand awareness, consumers recognize a specific brand name, their brand's characteristics and thus, this increases the likelihood of the brand being selected (Keller, 1993). Bujizen and Valkenberg (2005) refer brand awareness as one's active and passive knowledge of the brand.

To put it simply, brand awareness is one of the components of brand equity, having correlations with brand recall and recognition, and has been proven to improve customers' knowledge of the brand (Yazdanparast, Joseph and Muniz, 2016). Social Media Activities (SMM) activities are defined as one of the many types of e-marketing strategies that help companies to evaluate and review their current performance. Thus, building an effective framework is required to evaluate the effectiveness of the activities to generate brand awareness. Four components are selected based on previous studies to know the influence of social media marketing activities on brand awareness. The components are entertainment, trendiness, customization, and perceived risk. Hence, the framework provides researchers the ability to evaluate the relative importance of SMM activities regarding generating brand awareness (Godey et al., 2016, Seo and Park, 2018).

2.2 Entertainment

According to Agichtein, Castillo & Gionis (2008), entertainment is gained from social media experience through fun and play. Other similar perspectives from previous researchers say that the users are those who seek pleasure and want to be entertained, pleased and experience joy (Manthiou, Chiang and Tan, 2013). Prior studies also show

entertainment as a strong determinant to use social media (Kaye, 2007; Park, Kee and Valenzuela, 2009; Muntinga, Moorman and Smit, 2011). This is because they provide motivation for users to consume user-generated content (UGC) which is considered as important since it can be used as a great indicator for the quality of the brand itself. Besides, Muntinga et al. (2011) also discover that social media users use brand-related content to find enjoyment, relaxation and as a way for leisure time. In relation to brand awareness, entertainment represents the extent of how gratifying and compelling the page can be to ensure that consumers know and recognize the brand without any complication.

Based on the following literature review, the hypothesis will be as below:

H1: Entertainment has a significant influence on brand awareness.

2.3 Trendiness

Social media is also a medium to obtain updates on the latest information about any topics or issues (Naaman, Becker and Gravano, 2011). Consumers usually would turn to social media whenever they want to get reliable information since most of them have started to trust social media compared to corporate-sponsored information through the conventional marketing activities (Mangold and Faulds, 2009; Vollmer and Precourt, 2008).

Furthermore, Muntinga et al. (2011) mention that information referred to as trendy is covered by four sub-motivations which are known as surveillance, knowledge, pre-purchase information and inspiration. Surveillance is defined as the ability to observe and keep up with the latest updates based on one's social environment. On the other hand, knowledge is described as information that is related to brands which consumers obtain to get benefit from the knowledge and skill from other consumers in order for them to know more about a product or brand.

On top of knowledge, pre-purchase information is to make a better buying decision by reading reviews or threads on brand communities about a particular product. Lastly, inspiration denotes following brand-related information because the information serves as inspiration. From the above discussion, trendiness refers to the extent consumers can gain on the most recent and trendiest information in order to generate brand awareness.

Based on the following literature review, the hypothesis will be as below:

H2: Trendiness has a significant influence on brand awareness.

2.4 Customization

In social media, customization is based on the contact with individual users, which has a huge difference with conventional advertisement media (Seo & Park, 2018). It serves as a platform for companies to deliver novelty as well as to improve preferences of consumers and increase loyalty to their brands. Simply put, customization is referred to as creating a personalized message for the intended audience.

Additionally, Zhu and Chen (2015) mention that there are two distinct posts that can be identified; customized messages and broadcast, depending on the level of customization of the messages. A customized message targets a specific person or a small audience (e.g. a Facebook post). On the other hand, broadcast targets those who are interested (e.g. a Twitter post). In relation to brand awareness, customization refers to the extent to which social media channels provide customized information search in order for consumers to identify and recognize the brand.

Based on the following literature review, the hypothesis will be as below:

H3: Customization has a significant influence on brand awareness.

2.5 Perceived risk

Based on previous studies, perceived risk is a result of uncertainties related to consumer behaviour, and social media is used as a platform to help reduce those uncertainties (Sano, 2014). It is stated that social media reduces those uncertainties by letting consumers establish contact with companies and search for new information.

Perceived risk is selected as the component of social media marketing activities because of the intangibility of service provided by the company. For most service providers with high risk-perceiving management, customers are more inclined to interact with them to decrease the risk of using their service prior and while receiving it (Sano, 2015). In relation to brand awareness, perceived risk refers to the ability to relieve anxiety or concerns perceived by consumers in order for them to recognize the brand with ease.

Based on the following literature review, the hypothesis will be as below:

H4: Perceived risk has a significant influence on brand awareness.

3. Methodology

A quantitative research design was employed in this study. It involves objective measurements and statistical analysis of mathematical data using the questionnaire. For this study, the targeted population was from the followers of Company A's social media pages which consist of 16,286 followers. The figure was drawn from their followers on Facebook. A convenience sampling was adopted in this study and the survey is set in a manner where the Likert scale was added within the range of 1 which stands for 'Strongly Disagree' to 5 which stands for 'Strongly Agree'. All questions were adopted from previous studies. The sources are from Seo and Park (2018) and Godey et al. (2016). A total of 110 completed questionnaires were collected and used for further analysis.

Analysis and Discussion

4.1 Demographic Profile

Gender is one of the questions that was asked in the demographic profile section. Based on the analysis, there is a breakdown of 62.7% of female respondents and 37.3% of male respondents. The results show that there is a significant difference between the underlying frequency of the male and female responses in the researcher's sample.

Other than that, from the age point of view, 55.4% of the respondents are between the age group of 20 years old or younger to 21-30 years old. Next, the result is followed by the age group of 31-50 with 35.5%. The age group of 51 or older has the lowest age group respondents by approximately 9.1%. The result indicates that most of the followers of the social media pages of Company A are those from 20 years old or younger to 21-30 years old as 76.1% of the internet user are youths, according to the table below, and 80% of them use the Internet to log into their social media networks (Povera, 2018).

4.2 Factor Analysis

The result indicates that the degree of the common variance (KMO) is 0.919 while the Barlett's test shows that the significance level is 0.000 which is less than 0.05. This indicates that the sample is adequate for the study. Further analysis was on the factor loading where all of the items belong to appropriate factor with the score above 0.7. Thus, this helps to support the validity of the data used in this study.

4.3 Reliability Analysis

Cronbach Alpha's coefficient test shows that all independent variables have a consistent and reliable value. This is because all of the values are above 0.8. Every independent variable value is accordingly ranked with entertainment (0.983), trendiness (0.956), perceived risk (0.945) and customization (0.935). In addition to that, the Cronbach Coefficient Alpha for the dependent variable which is brand awareness has a value of 0.939.

4.4 Multiple Regression Analysis

The multiple regression analysis presents the influence of the four social media marketing activities on brand awareness. According to the rule of thumb, R^2 value of more than 0.5 (85 %) can be considered good and acceptable to be used for the purpose of forecasting.

The result of model summary for this study shows that the R^2 value is 0.859. This means that 85.9% of the model can be explained by the variables of this study, which are the entertainment, trendiness, customization and perceived risk. The balance of 14.1% cannot be explained as this indicates that there are other independent variables that should be included in this study and could further strengthen the regression equation.

Table 1 Results of Coefficient

Model		Unstandardized Coefficient		Standardized Coefficient	t	Sig.
		Beta	Std. Error	Beta		
	(Constant)	2.143	.139		15.416	.000
	Entertainment	.310	.055	.244	5.610	.000
	Trendiness	.739	.067	.514	10.991	.000
	Customization	.613	.066	.444	9.313	.000
	Perceived Risk	.424	.093	.299	4.559	.000

Table 1 presents the results of coefficients for each hypothesis; proving that all of the hypotheses are supported. Entertainment has a significant influence on brand awareness. This is due to the fun and engaging content on social media pages of Company A which make people more aware of the brand. This is demonstrated as some of the followers of Company A agree that their social media pages have enjoyable contents that cause them to be able to recognize the brand.

Next, trendiness also has a significant influence on brand awareness with the highest beta score of 0.739. This has proven that updating social media pages of Company A with the latest news and information initiates awareness from the customers over a particular brand, as most of followers agree on this. It has the highest mean value compared to other variables to support this statement.

Further result indicates that customization also has a significant influence on brand awareness, and it is one of the most dominant components of social media marketing activities that influence brand awareness based on the beta score of 0.613. Customization in social media is possible if brands want to exploit it to deliver personalized and optimized information generated by various sources to customers and it can also be used as an approach to generate positive perceived control and customer satisfaction (Ding and Keh, 2016; Nam and Yeo, 2011). As a proof, Company A has been providing customized information to their followers by making a separate account in their social media to bring to the table start-up news and news related to the FinTech industry only while displaying the uniqueness of their brand in order for customers to become more aware of their brands.

Finally, the last component which is perceived risk also has a significant influence on brand awareness. This is supported by the posts on Company A's social media pages that alleviated customers' concern to use their service that make people more aware of what the brand provides. Furthermore, the blog posts that they have promoted on their social media before became a contribution to their risk-perceiving management, which also assist in the novelty of their brand compared to other payment gateway providers.

5. Conclusions

The four components of SMMAs have a significant influence on brand awareness, confirming that SMMAs are a precedent contributing to the financial industry brand equity specifically the payment gateway provider. Regardless of the industry, these four components of SMMAs play a vital role in determining brand equity. In line with the past research done by Seo and Park (2018), in the airline industry, trendiness became the leading importance in generating brand awareness as it has the highest coefficient score. Since SMMAs are a tool to promote brand awareness, in building brand value, it is crucial for the operators to utilize this platform by encouraging the customers to read and keep up with the company's social media such as Facebook. Thus, updating company's social media with the latest news and information is crucial to make sure that people can gain necessary input to increase brand awareness.

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Measuring Intention to use IP-Belt among Pregnant Mothers using TAM Model: Technology-Based Innovation in Road Safety

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Abstract

This study presents the behavioural intention to use an innovation of a safety belt specially developed for pregnant mothers, named IP-Belt. This newly developed innovation aims to enhance the safety of these pregnant mothers when they are behind the wheel, or as passengers; and this research is done as an extension to the development of this innovation. Technology Acceptance Model (i.e. TAM) was adopted in predicting the behavioural intention to use the IP-Belt. A survey was conducted among pregnant mothers to see their intention to use the said innovation. The data was analysed using the Structural Equation Modelling technique with Partial Least Square estimation theory. The analysis indicated that Perceived Ease of Use and Perceived Usefulness had a positive significant influence towards Attitude and Trust, whereas all other variables (i.e. Perceived Ease of Use, Perceived Usefulness, Attitude, and Trust) also significantly influenced behavioural intention to use the IP-Belt. In addition, the study indicated that Attitude and Trust had a partial mediating effect towards the relation of Perceived Ease of Use and Perceived Usefulness towards behavioural intention to use the IP-Belt.

Keywords: Pregnancy Safety Belt, IP-Belt, TAM Model, PLS-SEM, Mediating analysis.

1. Introduction

Road traffic injuries are known as one of the causes of death worldwide. World Health Organization (WHO) in the Global Status Report on Road Safety (2018) stated that the number of death on the road all around the world is estimated at 1.35 million people each year, while millions number of lives sustained serious injuries and/or having an adverse consequence to their health and life due to being involved in road accidents.

Malaysia is one of the countries with high traffic fatality rates (Abdelfatah, 2016; Zulhaidi, Mohd Hafzi, Mohd Rasid, Azmi & Norlen, 2016). In Malaysia itself, in average there are around 6,430¹ reported traffic fatalities yearly where total traffic fatalities in 2018 was 6,284 and traffic fatalities as at March 2019 was 1,483 (Road Safety Department of Malaysia,

¹ Calculation is based on total fatalities due to road accidents from 1997-2018

2019). This statistic indicates that on average, 17 to 18 fatalities/deaths are reported due to road traffic accidents each day in our country. The dataset in Table 1 highlighted the number of deaths by road user category. Most of the number of fatalities (62%) comes from riders of motorised 2 or 3 wheelers while 23% are those who drive 4-wheeled cars and light vehicles.

Table 1 Number of Traffic Fatalities in a Span of 10 years (2009-2019)²

VEHICLES	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 ³	TOTAL
CAR	1,405	1,421	1,389	1,435	1,399	1,258	1,358	1,489	1,269	1,167	286	13,876
MOTORCYCLE	4,067	4,036	4,169	4,178	4,294	4,179	4,203	4,485	4,348	4,128	944	43,031
PEDESTRIAN	589	626	530	530	455	515	482	511	441	407	115	5,201
BICYCLE	224	192	172	156	159	124	107	123	162	122	46	1,587
BUS	31	77	29	32	60	29	20	29	23	39	15	384
LORRY	213	202	247	194	210	221	223	186	199	192	29	2,116
VAN	91	97	93	86	80	73	71	65	62	47	29	794
4x4	78	154	151	159	158	129	130	142	113	88	15	1,317
OTHERS	47	67	97	147	100	146	112	122	123	94	4	1,059
TOTAL	6,745	6,872	6,877	6,917	6,915	6,674	6,706	7,152	6,740	6,284	1,483	69,365

Though road traffic crashes may rely heavily on the human factor such as drivers' behaviour and current condition while driving (Cramton, 1969; Nordin, 2012; Petridou & Moustaki, 2000; Zulhaidi, Mohd Hafzi, Mohd Rasid, Azmi & Norlen, 2016) all other factors must be accounted for such as existing national law regarding to road safety.

The risk prevention and reduction measures have been implemented and improved over time to reduce the number of fatalities due to road traffic injuries. Albeit all these efforts, the enforcement of law in Malaysia about road safety (i.e. speed limit law, drink-driving law, motorcycle helmet law, seatbelt law, law on mobile-phone usage while driving) is only in the lower mid-level (4 or 5 out of 10 points), with no restriction or law with regard to child restraint/sitting in the front seat. This level of enforcement is considered as low when compared to Singapore, where the levels of enforcement for all the aforementioned are at the higher level of 8 or 9 out of 10 points (Toroyan, 2015).

Amidst all these prevention and risk reduction measures, wearing seatbelt while sitting in a car is one of the important factors in ensuring the level of criticalness in a sudden mishap. In Malaysia, seatbelt is a compulsory component in any type of 4-wheeled cars and light vehicles as wearing one while occupying a vehicle is to be adhered by all drivers (and the passengers) as regulated in the Road Transport Act 1987 (2006):

“...to require safety seatbelts to be fitted to such class or description of motor vehicles as may be specified, to prescribe the minimum standards of quality of material and construction with respect to road safety seatbelts and the position in which such safety seatbelts shall be fixed and to require the use of such safety seatbelts.”

² Statistic excepted from Report and Statistics on Road Safety (2019),

³ Figure in 2019 is as at March 2019

Wearing a seatbelt reduces the risk of a fatal injury up to 50% and 75% for the front seat occupants and rear seat occupants respectively (World Health Organisation, 2015). Prior to this research done by WHO, in the late 90's, a research done by Evans (1996) stated that safety belt or seatbelt is effective in preventing fatalities but not so much in preventing injuries. This research has also highlighted that though wearing a seatbelt could reduce the risk, its effectiveness is abridged when the severity of the crash escalates.

In a similar context in Malaysia, a study done by Zulhaidi et al. (2016) has also highlighted the importance of seatbelts and child safety seat in protecting the users from the force of a sudden road collision/crash. Furthermore, wearing a seatbelt has shown to significantly reduce the risk of being thrown out of the vehicle in the event of a crash (World Health Organisation, 2015).

In these days and age, female drivers are not rare, nor it is uncommon for pregnant mothers to be behind the wheel. Though the risk of something adverse happening due to mishap is high in any situation for these pregnant mothers, yet the leading cause of loss of lives or traumatic injuries for these pregnant mothers (either to themselves or their fetus or both) is road traffic accidents (Acar & Meric, 2017)

Numerous researches have been done looking at: the safety of pregnant drivers (Acar & Meric, 2017; Khairil Anwar & Noor Faradila, 2010; Vladutiu & Weiss, 2012), the health risk involved when pregnant mothers are driving (Goodyear, 2018; Weiss & Strotmeyer, 2002), the effect and impact of road traffic crashes to the pregnant occupant (either driver or passenger) and her fetus (Hyde, Cook, Olson, Weiss, & Dean, 2003; Klinich et al., 2008; Klinich, Schneider, Moore, & Pearlman, 1998; Motozawa, Hitosugi, Abe, & Tokudome, 2010) as well as reporting the incidence, risks, and characteristics of pregnant women in road collisions (Vladutiu et al., 2013; Weiss & Strotmeyer, 2002).

Even though these mothers knew that not buckling up is a physical peril but a substantial amount of them still choose not to wear a seatbelt, as observed by Khairil Anwar and Noor Faradila (2010). They have noted that most of the pregnant mothers who choose not to buckle up their seatbelt believed that wearing one would harm (or kill) the baby in the womb (should there be a sudden mishap on the road) and it is safer for the fetus if the mother did not wear a seatbelt when she is driving. However, this notion has no scientific evidence to support it. On the contrary to this belief, wearing a seatbelt while driving is proven to be safer for these pregnant mothers.

Some of these past researchers have highlighted the impact of motor vehicle collision to pregnant women drivers (at several stages of pregnancy) while wearing or not wearing a seatbelt. Findings on a study done by Motozawa et al. (2010) stated that seatbelt should be encouraged to be used as it protects pregnant women drivers during various types of accidents as opposed to not wearing one and Acar and Meric (2017) mentioned that risk increases significantly in pregnant woman and her fetus when no seatbelt is worn, implying that the restraint system plays an important role to the safety of the pregnant women drivers and the fetus. However, its role in providing protection may vary according to the stages of pregnancy. To sum it up, both studies stressed that buckling up is still safer than not buckling up for these pregnant women.

A survey by Khairil Anwar and Noor Faradila (2010) has found that there are flaws in the current seatbelt design for this type of drivers (i.e. it is considered as uncomfortable, it lacks safety measures for them when they alter the position of the strap using a strap stopper, the strap restraining the body is not ergonomic and causes discomfort, and the strap exerts pressure on the womb of pregnant women). Not buckling up is not an option as it imposes a physical hazard to them and consequently it could be a catalyst for an increased risk of death or other adverse effects to these women.

With these issues raised, there is a need to create an innovation for a safety belt that could accommodate the special needs of pregnant mothers behind the wheel (or as passengers). This modern innovation of safety belt was designed to be installed separately to any type of vehicles. It was developed with enhanced safety features and a better design to provide comfort and ease of movement to the wearer. Therefore, as an extension to the development of the said innovation, this study was carried out in order to identify the behavioural intention to use it by adopting the Technology Acceptance Model (TAM), looking at the aspect of Perceived Ease of Use and Perceived Usefulness and its influence towards Attitude and Trust.

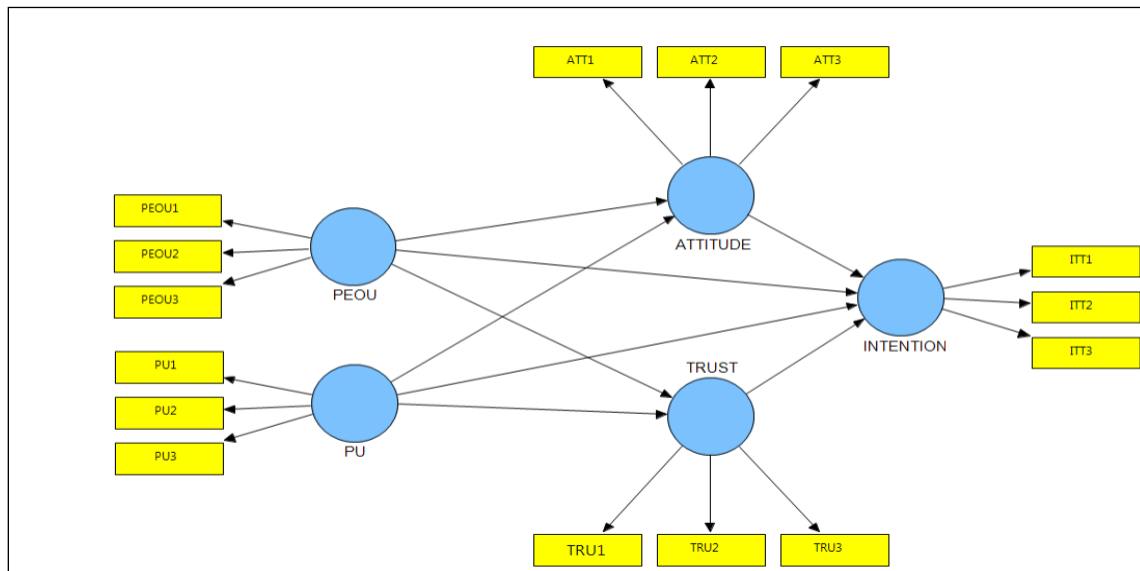
2. Literature Review

2.1 Technology Acceptance Model (TAM)

The technology acceptance model (TAM) is a widely used theory to explain acceptance behaviour of users towards a technological enhancement product and/or service. It was first introduced by Davis (1989) to identify the changes in people's behaviour. Till this day, TAM is still one of the most popular research models in predicting the acceptance and intention to use a technology-related product/service.

Earlier, this model was used to predict the use and acceptance of information technology; however, throughout the year, the model has been modified and evolved where it can be used not only for predicting the usage of an information system but also to gauge the individual acceptance behaviour towards technology enhancement products and/or services (see: Ha & Stoel, 2009; Hu et al., 2016; Park, Nam, & Cha, 2012; Punnoose, 2012; Schnall & Bakken, 2011; Shih, 2004; Shroff, Deneen & Ng, 2011; Su, Tsai & Chen, 2012; Wong, Rosma, Goh & Mohd Khairizan, 2013; Wu & Chen, 2017) which covers diverse fields such as education, healthcare, IT-related services, business and software engineering.

Based on TAM, there are two factors deemed to be important in predicting the behavioural intention to use which are 'perceived usefulness' and 'perceived ease of use'. These two factors were proven to be reliable and strong determinants on the usage behaviour of information technology (Davis, 1989) and this model has been tested by other researchers as aforementioned and most of the studies yield reliable results and confirmed the original TAM's findings. These two factors, however, can be influenced by other external factors, such as social, cultural and political factors (Surendran, 2012) and according to Legris, Ingham, and Colletette (2003), in order for TAM to be a broader accepted model, it has to include other significant variables which relate to human and social changes (as categorised in the change of structure, behaviour, culture and value system).



2.2 Theoretical Framework

Based on the literature reviews explained earlier, this study employed the TAM's model for measuring the behaviour intention to use IP-Belt among the respondents. Figure 1 shows the theoretical foundation of the constructs in the model.

Figure 1 Technology Acceptance Model (TAM)

Therefore, the following hypotheses were anticipated:

- H1: Perceived Ease of Use (PEOU) has a significant effect towards Attitude
- H2: Perceived Ease of Use (PEOU) has a significant effect towards Trust
- H3: Perceived Usefulness (PU) has a significant effect towards Attitude
- H4: Perceived Usefulness (PU) has a significant effect towards Trust
- H5: Perceived Ease of Use (PEOU) has a significant effect towards Intention to Use
- H6: Perceived Usefulness (PU) has a significant effect towards Intention to Use
- H7: Attitude has a significant effect towards Intention to Use
- H8: Trust has a significant effect towards Intention to Use
- H9: Attitude mediates the relationship between Perceived Ease of Use (PEOU) and Intention to Use
- H10: Attitude mediates the relationship between Perceived Usefulness (PU) and Intention to Use
- H11: Trust mediates the relationship between Perceived Ease of Use (PEOU) and Intention to Use
- H12: Trust mediates the relationship between Perceived Usefulness (PU) and Intention to Use

3. Methods

3.1 Sample and Data Collection

The respondents that participated in this study were pregnant women that have undergone pregnancy medical check-ups at three government health clinics. These health clinics,

located at the Segamat district, which is a part of the Johor state, were chosen as a practical way of approaching the targeted respondents (i.e. Klinik Kesihatan Jementah, Klinik Kesihatan Buloh Kasap, and Klinik Kesihatan Badan Putra) and also for being near to the researchers' work in terms of location. Around 100 respondents were willing to participate in this study during the survey activities which were conducted for three months (October 2017 to December 2017). As for the data collection procedure, the researchers decided to use face-to-face interview for measuring the targeted variables since it can give a high response rate (Saunders et al., 2009). Before they filled up the questionnaire, each respondent needed to first test the IP-Belt. After that, the respondent was asked to fill the questionnaire.

3.2 Instrument

The questionnaire consists of two sections, which are respondent background and the behavioural intention sciences model (i.e. TAM model) which consists around 18 items (i.e. 3 items for the background section and 15 items for the TAM section). The information about TAM was collected using a seven-point Likert scale (i.e. 1 = Strongly Disagree to 7 = Strongly Agree) that was adapted from Kamarudin et al (2013) and S. Gao et al (2011). Table 2 shows the items for measuring the targeted variables in the TAM model for this study.

Table 2 TAM Measurement

Variables	Coded	Items
Perceived Ease of Use	PEOU1	I find IP-Belt easy to use without any skillful requirement
	PEOU2	I find IP-Belt is very flexible to used it
	PEOU3	I find IP-Belt ensure me to always wearing a pregnancy belt properly
Perceived Usefulness	PU1	Using the IP-Belt would alert me to wear safety pregnancy belt properly
	PU2	Using the IP-Belt make me concern about to think my pregnancy safety firstly
	PU3	Using the IP-Belt would avoid my pregnancy from the harmful
Attitude	ATT1	It is favorable to installed IP-Belt in my car
	ATT2	It is brilliant decision to have IP-Belt in my car
	ATT3	IP-Belt is the right thing to be installed in my car
Trust	TRU1	I feel confident with my pregnancy safety when I used IP-Belt
	TRU2	I feel more protected with my pregnancy safety when I used IP-Belt
	TRU3	I feel the IP-Belt is a risk-free system for the pregnancy mom's.
Intention to Use	ITT1	I intend to use IP-Belt if it is provided free
	ITT2	I will use IP-Belt if it is already installed (built-in) in a car
	ITT3	I would recommend to others pregnancy mom's to use IP-Belt

Note: All items were measuring using 7-point Likert scale (1 = Strongly Disagree to 7 = Strongly Agree).

3.3 Data Analysis

The questionnaire consists of two Structural Equation Modelling technique with Partial Least Square (i.e. PLS-SEM) estimation method was employed to explore the relationship among the targeted constructs (Astrachan et al., 2014) using SmartPLS 2.0 software. This technique allows the researchers to test the convergent and discriminant validities of the measurement model that being proposed since the sample sizes can be considered small (n = 100) (Hair et al., 2017). For measuring the significance effect of the paths, 5000

replications of samples (i.e. bootstrapping) were used by accessing the Bootstrap-t confidence level as well as t-statistics (Ong and Puteh, 2017; Hair et al., 2012).

Besides that, in order to measure the effect of mediating, the following procedure for deciding the mediating effect was used (Zhao et al., 2010; Lacobucci et al., 2007). The procedures are:

- i. If the path of independent variable to dependent variable was not significant and the indirect effect is significant, hence the mediating effect was a full mediation effect.
- ii. If the path of independent variable to dependent variable was significant and the indirect effect is significant, hence the mediating effect was a partial mediation effect.

4. Results and Discussions

4.1 Respondents' Profile

Table 3 shows the respondents' profile in this study. Among these 100 pregnant women, the majority of them were in the range of age between 21 to 25 years old (48.0%), whereas only 5% of them were in range of age between 36 to 40 years old. In terms of race distribution, the analysis indicated that 55% of the respondents were Malay respondents, followed by 35% and 10% of Chinese and Indian respondents. Regarding the pregnancy period, the majority of the respondents stated that currently, the age of their pregnancy was in the range of 3 - 6 months (71%).

Table 3 Respondent's Profile

Profile	Frequency	Percentage
Age		
21-25 years old	48	48.0
26-30 years old	32	32.0
31-35 years old	15	15.0
36-40 years old	5	5.0
Race		
Malay	55	55.0
Chinese	35	35.0
Indian	10	10.0
Pregnancy Period		
Less than 3 months	11	11.0
3-6 months	71	71.0
More than 6 months	18	18.0

a. Measurement Model Analysis

As for assessing the quality of the measurement model, convergent and discriminant validities were performed (Ong and Puteh, 2017; Hair et al., 2017). Table 5 indicated that all indicators have passed the minimum requirement of the convergent validity, which was the factor loading values of above .70, and were also statistically significant. Besides that, each construct had an AVE value of more than .50, and the Composite Reliability and Cronbach's alpha for each construct was above .70. As for discriminant validity, the heterotrait-monotrait (i.e. HTMT) technique was performed. Table 4 indicated that each construct was totally discriminant to each other since each HTMT value was less than .90

(Hair et al., 2017). Therefore, the measurement model can be considered to pass the minimum criterion of the convergent and discriminant validities aspect, hence the structural model from this measurement model can now be evaluated.

Table 4 HTMT Discriminant Analysis for Measurement Model

	(1)	(2)	(3)	(4)	(5)
(1)	-				
(2)	0.695	-			
(3)	0.301	0.701	-		
(4)	0.295	0.420	0.732	-	
(5)	0.345	0.635	0.606	0.498	-

Note: (1) = Perceived Ease of Use; (2) = Perceived Usefulness; (3) = Attitude; (4) = Trust; (5) = Intention to Use.

Table 5 Convergent Validity for Measurement Model

LV	Indicator	Loading	AVE	Composite Reliability	Cronbach's Alpha
Perceived Ease of Use	PEOU1	.927**	.889	.960	.938
	PEOU2	.960**			
	PEOU3	.942**			
Perceived Usefulness	PU1	.838**	.771	.910	.850
	PU2	.935**			
	PU3	.857**			
Attitude	ATT1	.727**	.641	.842	.717
	ATT2	.806**			
	ATT3	.864**			
Trust	TRU1	.913**	.800	.923	.874
	TRU2	.931**			
	TRU3	.836**			
Intention to Use	ITT1	.911**	.763	.906	.845
	ITT2	.863**			
	ITT3	.846**			

Note: LV = Latent Variable; AVE = Average Variance Explained; **p < .01.

b. Structural Model Analysis

The total variations (R²) explained for Attitude and Trust were .531 and .345. It is indicated that in a simultaneous concept, Perceived Ease of Use and Perceived Usefulness were able to explain about 53.1% and 34.5% of variance towards the Attitude and Trust constructs. Meanwhile, at the same time, Perceived Ease of Use, Perceived Usefulness, Attitude, and Trust constructs were able to explain about 66.7% of variance towards Intention to Use. Hence, it can be concluded that the structural model was able to predict a good intention to use the IP-Belt among the pregnant women since the R² value can be considered large (Hair et al., 2017). In addition, the assessment of effect size (f²) and predictive relevance (q²) (i.e. Table 6) for each path can be considered as having moderate to large effects for each path in the structural model (Henseler & Chin, 2010).

As for the assessment of paths, the analysis indicated that Perceived Ease of Use ($\beta = 0.555$, $t = 13.989$, $p < .01$) and Perceived Usefulness ($\beta = 0.264$, $t = 6.507$, $p < .01$) had a positive significant influence towards Attitude. Hence, it is indicated that if the average levels of Perceived Ease of Use and Perceived Usefulness were high, then the levels of

Attitude will also be high. In the same way, Perceived Ease of Use ($\beta = 0.345$, $t = 6.921$, $p < .01$) and Perceived Usefulness ($\beta = 0.327$, $t = 6.923$, $p < .01$) also had a positive significant influence towards Trust. Therefore, the same conclusion can be made, which is, if the average levels of Perceived Ease of Use and Perceived Usefulness were high, then the levels of Trust will also be high.

Regarding the Intention to Use construct, the analysis indicated that Perceived Ease of Use ($\beta = 0.123$, $t = 2.071$, $p < .05$), Perceived Usefulness ($\beta = 0.205$, $t = 5.745$, $p < .01$), Attitude ($\beta = 0.454$, $t = 10.379$, $p < .01$), and Trust ($\beta = 0.191$, $t = 4.379$, $p < .01$) were found to have a positive significant influence towards Intention to Use. It is indicated that in a simultaneous concept, if the average levels of Perceived Ease of Use, Perceived Usefulness, Attitude, and Trust were high, then the levels of Intention to Use will also be high. Figures 2 and 3 show the analysis of the PLS-SEM.

Table 6 Effect size (f^2) and Predictive Relevance (q^2)

	f^2	Remark	q^2	Remark
PEOU → ATTITUDE	.564	Large	.501	Large
PEOU → TRUST	.453	Large	.467	Large
PEOU → INTENTION	.234	Moderate	.226	Moderate
PU → ATTITUDE	.387	Large	.357	Large
PU → TRUST	.416	Large	.429	Large
PU → INTENTION	.278	Moderate	.196	Moderate
ATTITUDE → INTENTION	.496	Large	.486	Large
TRUST → INTENTION	.213	Moderate	.186	Moderate

Note: PEOU = Perceived Ease of Use; PU = Perceived Usefulness; ATTITUDE = Attitude; TRUST = Trust; INTENTION = Intention to Use.

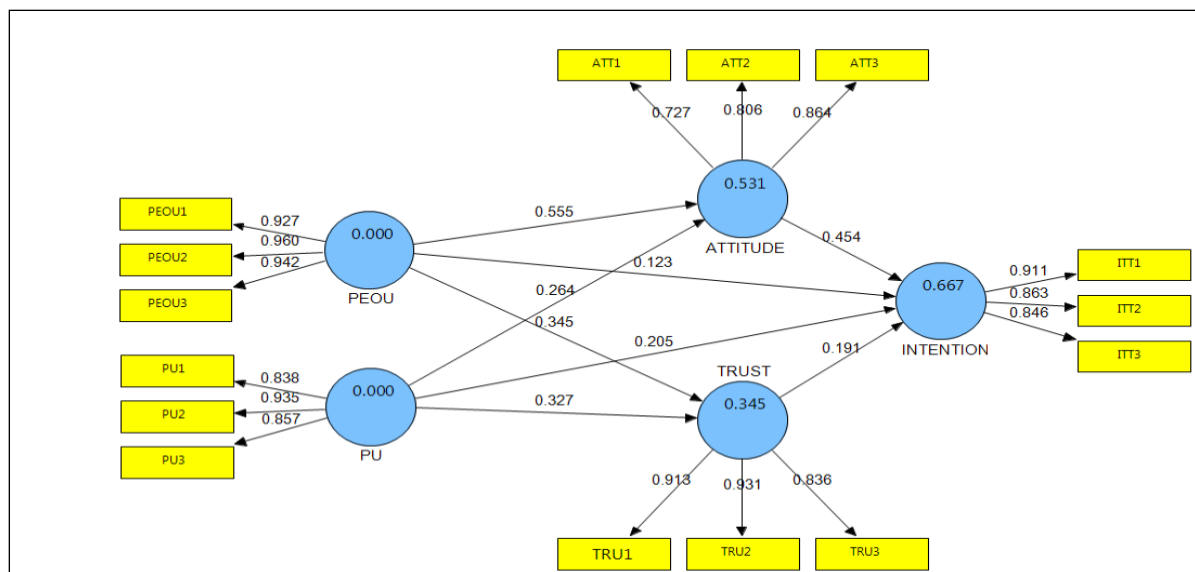


Figure 2 Assessment of the Path Coefficients Analysis

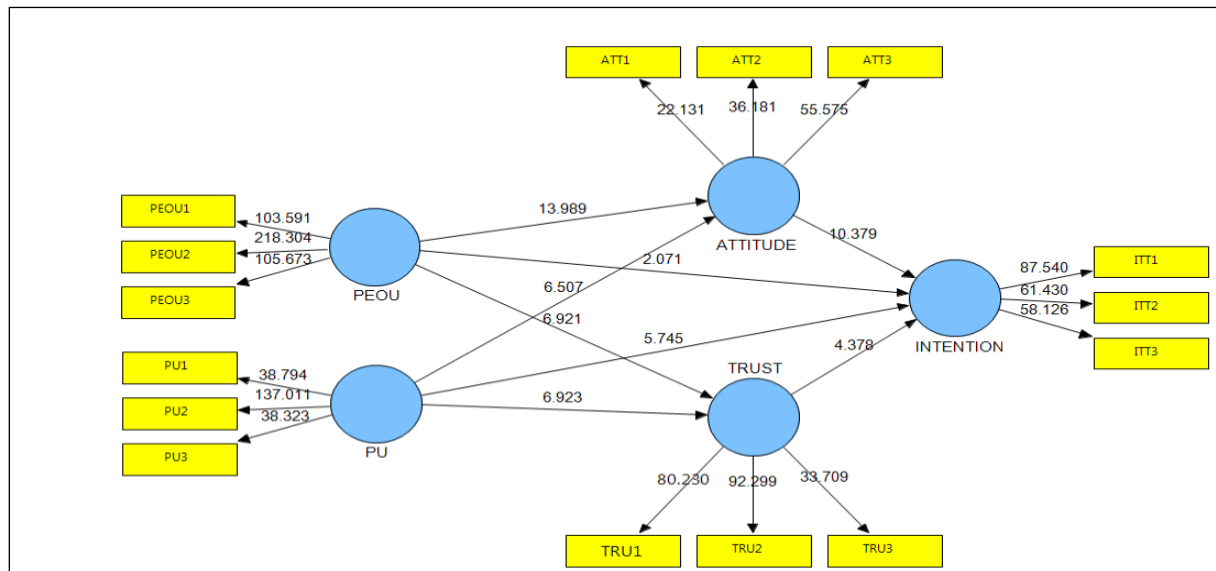


Figure 3: Assessment of the Bootstrapping Analysis

c. Mediating Analysis

The indirect effect assessment confirmed that Attitude mediated the relationship of Perceived Ease of Use → Intention to Use (Indirect Effect Coefficient = 0.252, $t = 3.623$, $p < .01$) and Perceived Usefulness → Intention to Use (Indirect Effect Coefficient = 0.120, $t = 2.723$, $p < .01$). Besides that, Trust also mediated the relationship of Perceived Ease of Use → Intention (Indirect Effect Coefficient = 0.066, $t = 2.056$, $p < .05$) and Perceived Usefulness → Intention (Indirect Effect Coefficient = 0.062, $t = 2.013$, $p < .05$). All the indirect effect analyses were also supported by the indirect analysis of bootstrapping confidence interval, where all the 95% of confidence intervals did not include zero (Refer Table 7). Therefore, the effect of Attitude and Trust can be categorised to have a partial mediating effect towards the relationships of Perceived Ease of Use → Intention to Use and Perceived Usefulness → Intention to Use, since the direct effects of Perceived Ease of Use → Intention to Use ($\beta = 0.123$, $t = 2.071$, $p < .05$) and Perceived Usefulness → Intention to Use ($\beta = 0.205$, $t = 5.745$, $p < .01$) were statistically significant.

Table 7 Indirect Effect Assessment

Path	IEC	t-value	Bootstrap-t
PEOU → ATTITUDE → INTENTION	0.252	3.623**	(0.185, 0.295)
PU → ATTITUDE → INTENTION	0.120	2.723**	(0.107, 0.159)
PEOU → TRUST → INTENTION	0.066	2.056*	(0.026, 0.103)
PU → TRUST → INTENTION	0.062	2.013*	(0.022, 0.108)

Note: PEOU = Perceived Ease of Use; PU = Perceived Usefulness; ATTITUDE = Attitude; TRUST = Trust; INTENTION = Intention to Use; IEC = Indirect Effect Coefficient; the result of Bootstrap-t was based on 95% bootstrap confidence interval with 5000 replication; ** $p < .01$; * $p < .05$.

5. Conclusion

Car accidents among pregnant mothers that can sometimes kill the fetus, cannot be totally prevented but it can be avoided or minimised through protective equipment like a more protective seatbelt. Hence, a new approach is needed to overcome this issue by implementing new seat belt designs for the passengers like the IP-Belt. In fact, an interdisciplinary research applied in this study by using the TAM model confirmed that Perceived Ease of Use and Perceived Usefulness significantly influenced the intention to use this IP-Belt. In addition, Attitude and Trust also significantly influenced the respondents to use this IP-Belt. Therefore, it is indicated that all characteristics in the IP-Belt design can be considered as having a good design since it can build up a good attitude and trust from the perspective of perceived ease of use and perceived usefulness of the product. Therefore, this IP-Belt can be considered a practical seat belt design for improving the safety levels of pregnant women during their destination journey and can also be applied in other transportation modes such as buses or other public transport.

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The effect of perceived usefulness, perceived ease of use, trust and perceived risk toward E-wallet usage

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Abstract

In the era of technology revolution, e-wallet has become one of the top methods of payment used all over the world. However, its services are considered in the infancy stage and still relatively new to the Malaysian consumers. So far, limited studies can be found to measure the intention to use E-wallet in Malaysia. This paper seeks to examine the factors affecting consumers' intention towards the usage of e-wallet particularly among youth between 18-30 years old in Malaysia. In this study, perceived usefulness, perceived ease-of-use, perceived risk and trust will be examined to identify the relationships with consumers' intention to use an E-wallet in Malaysia. Technology Acceptance Model (TAM) will be used to construct the conceptual framework. This paper hopes to provide insights to the E-wallet literature by identifying factors influencing consumers' intention to use E-wallet.

Keywords: E-wallet, TAM, Youth, Technology, Malaysia

1. Introduction

Information and Communication Technology (ICT) advancement has transformed the lives of individual and organization duties cooperatively. The advances of Digital and ICT have a huge impact and provide improvements in term of finance, economics, operational costs (Slozko & Pello, 2015) and strengthen the organizational performance (Ali, 2010).

The era of ICT and digital conversion has come along with avant-garde reversal in the world business environment, whereby the majority of the business exchanges are consistently going over from cash-based exchanges to electronic based (Mohamad, Haroon, & Najiran, 2009). Additionally, the worldwide explosion of the web and its fast use through the years has contributed much in smoothing electronic commerce in worldwide business condition (Fernandes, 2013).

The Technology Acceptance Model (TAM) has turned out to be remarkable amongst the best gear for understanding the technology acceptance in numerous areas in the industries, such as business (Ha & Stoel 2009), education (Huang et al. 2007), healthcare (Melas et al. 2011), and construction (Davies & Harty 2013). The technology acceptance model was introduced by Davis (1985) with the objective of TAM that is to get a better and improved understanding of user acceptance and act as a theoretical guideline for new development of technology system. Davis (1985) also visualized that his model might offer a method for testing user acceptance. In order to understand consumer attitude regarding the technology, TAM is a method used by researchers to reveal consumer belief towards a specific innovation. For instance, it was revealed that consumers find out that the use of mobile phones is very easy and helpful (Mao et al., 2005)

As the formats of money and transaction modes change, new financial media increase and the beginning of the digital era has come to the entire world (Miller et al, 2002). Various forms of money have been utilized under the term digital payment and it is also combined with electronic transfer on funds, electronic transactions for goods and services payment process, prepaid devices, and digital wallets or e- wallet (Misra et al, 2004). The evolution of payment method begins from barter system to cash, cash to cheque, cheque to credit card and now the new method payment focuses more on the electronic and mobile commerce known as mobile wallet or e-wallet. In addition, various mobile payment platforms were designed and it allows consumers to perform any payment, transfer money, as well as manage their finances anytime and anywhere (Dahlberg, 2008, Thakur & Srivastava, 2014; Tam & Oliveira, 2017). Consequently, there has been an outstanding growth in worldwide mobile payment volumes. The global mobile payment figure in 2015 was US\$450 billion and is estimated to surpass US\$1 trillion in 2019 (Statista, 2016).

In Malaysia, although the technology is already advanced and keeps improving from time to time, the utilization of e-wallet is low. Moreover, most of the transactions in Malaysia are still in cash. It shows that e-wallet in Malaysia is still in the embryonic stage and not ready to be practiced by the society.

2. Literature review

This study attempts to investigate the factors that affect the intention to use E-wallet among youths in Malaysia.

A. E-wallet

As stated by Halevi, Ma, Saxena, and Xiang (2012), mobile wallet can be defined as the usage of mobile phone by users to perform financial transactions and it is between two devices known as sender and receiver to buy goods or pay bills. Mobile Wallet or e-wallet is also defined as an application stored in smartphones allowing consumers to perform various mobile financial transaction (Qasim, Siddiqui, & Rehman, 2012).

Uddin and Akih (2014) added that E-wallet is known as a payment system which provides a network service and program that enables the consumers to manage information related to purchasing process, loyalty and membership programme and also

getting banking information. Additionally, E-wallet is also known as mobile payment and has come to the recognition of users and starts showing its existence to the internet users in term of mobile payment (Falk, Kunz, Schepers & Mrozek, 2016).

A study conducted by Amin (2009) stated that perceived ease of use and perceived usefulness have a significant impact towards the acceptance on mobile wallet in Sabah. The findings explained that bank customers feel mobile wallet is easy to be used and handled when less effort is required to use the system. They will use mobile wallet often if they find that this method of payment can increase their financial transaction performance.

Moreover, another study performed by Madan and Yadav (2016) pointed out that perceived risk has negative influence on behavioural intention to adopt mobile wallet. The findings clarified that multi-layer security systems should be developed by the telecommunication service providers and firms that participate in making a payment process as well as the financial institutions in order to minimize any risk by consumers that use mobile wallet transaction.

Mobile wallet or e-wallet studies in Malaysia are limited and most studies were conducted in developed countries (Shaw, 2014; Shin, 2009). Since mobile wallet is still in a growing stage in Malaysia, due to limited information available on mobile wallet, most consumers have no chance to experience it. Therefore, due to the mixed findings and limited literature particularly on e-wallet, there is an urgency to conduct determinants particularly on the intention to use e-wallet in Malaysia.

B. Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) was created by Fred Davis in 1986. Based on an adaptation from Theory of Reasonable Action, TAM was designed in order to measure the consumer acceptance towards information system and technology. There are two particular elements recommended in this theory where it provides a better understanding for the technology acceptance. There is perceived usefulness ("the degree to which a person believes that using a particular system would enhance his or her job performance") and perceived ease of use ("the degree to which a person believes that using a particular system would be free of physical and mental efforts").

TAM is already well-known and has been mentioned in numerous research particularly when dealings with technology acceptance (Lee, Kozar & Larsen, 2013). Slade et al., (2015) added that information system adoption or information technology studies evaluation show that TAM has become the most used framework. TAM also helps scholars and experts to distinguish why some of the technology or systems can be accepted and rejected along with a good clarification and estimation (Lai, 2017)

There are several reasons in selecting TAM as underpinning theory. Firstly, due to its simplicity and good prediction which can be used in various information system (Guriting & Ndubisi, 2006; Pikkarainen et al., 2004; Kleijnen et al., 2004; Venkatesh & Morris, 2000). Next, there is a noteworthy percentage of studies that used TAM especially from mobile wallet perspective (Slade et al., 2015). Although TAM has been broadly used to measure usage and acceptance of information system (Mathieson, 1991; Davis &

Venkatesh, 1996), there may be an extension of TAM that have been validated and tried (Liu Lai & Zainal, 2014; Lai, 2016). Hence, this study will include several other variables for the extension of TAM to determine the intention to use E-wallet.

Next, according to Shaw (2014), perceived ease of use and perceived usefulness are the main aspects that influence the intention to use. In addition, research using TAM shows that there is a positive relationship between perceived usefulness and perceived ease of use (van der Heijden, 2003; Yang, 2005; Yang, 2012). Therefore, both variables were included in the current study to determine consumer intention on the usage of e-wallet. As stated by Mun, Joyce, Jae and Janice (2006), attitude is removed from the theory because of inadequate power to mediate between the constructs and intention to use. Therefore, attitude is eliminated in this study.

Moreover, Lui and Jamieson (2003), Pavlou (2003), and Thiesse (2007) clarified that researchers have empirically and carefully investigated factor of trust and perceived risk on the developed TAM. Scholars have proved that trust and perceived risk are the important factors to explain user acceptance of ICT towards the e-business environment (Featherman & Pavlou, 2003). Therefore, perceived risk and trust are the two extensions of variables that will be included in this study.

C. Perceived Usefulness

Perceived usefulness can be defined as individual beliefs that the enhancement of his or her job performance can be achieved by using a specific system and it will provide him or her with new features that secure and facilitate the performance (Ham & Ho, 2011). Agrebi and Jallais, (2014) stated that perceived usefulness is defined as an opinion of the persons towards enhancement of performance on the task given to them by using the specific system. Intention to use by consumer will occur if they perceive the technology as very useful (Venkatesh & Davis, 2000). Therefore, perceived usefulness is associated with the behavioural intentions.

Shaw (2014) holds the view that perceived usefulness significantly influences intention to use a mobile wallet. The findings explained that the promise to deliver a desired outcome leads individuals to use the systems. In the case of mobile payments, the participants mentioned that fast transaction can be made by them because mobile phones are easily ready on their hands. Furthermore, smartphones also offer benefits of getting rewards and digital receipts and make it look more useful to be used.

There are a lot of studies that used perceived usefulness as a variable and most of the findings show perceived usefulness has a positive impact to technology acceptance. It shows that perceived usefulness plays an important part in deciding the technology acceptance which will lead to better results for future study. Therefore, it is important for this study to investigate perceived usefulness from the context of mobile payment.

D. Perceived Ease of Use

Saade and Bahli (2005) defined perceived ease of use as one's beliefs that less effort is needed by using a specific system. According to Al-Amri, Marol, Jamaludin, Samy, Magalingan, Hassan, Ten and Daud (2018), a user-friendly combination and impressive

guide on how to use mobile payment system will earn consumers' trust as well as proving the ability and generosity of the service providers. Similarly, perceived ease of use is a perception about operating a technology with minimum efforts (Pham & Ho, 2015). Acceptance of a system by the consumers can be measured by the ease of use of a particular system. It is also considered one of the dimensions that consist the largest influence on new technology acceptance (Davis, Bagozzi & Warshaw, 1992; Moore & Benbasat, 1991).

According to Pooi, Khalid and Nadarajah (2018), there is a significant impact between perceived ease of use and the intention to use mobile payment services. Another study performed by Guriting and Ndubisi (2006) shows that in the context of e-payment usage in Malaysia, perceived ease of use has a significant positive relationship with the behavioural intention of the consumers in Malaysia. Abrazhevich (2001) concluded that consumers will be attracted more to e-payment system if the design is effective. Consumers will feel at ease if the method of new payment is easy to be understood and used. It will attract the consumers to adopt and use the e-payment (Abrazhevich, 2001).

From all of these studies, significant evidence of the relationship between perceived ease of use and the intention to use a technology were found across different cultures and respondents (Natarajan, Balasubramanian & Kasilingam, 2017). Hence, due to the mixed findings by earlier scholars, it is necessary for this study to investigate perceived ease of use towards the intention to use e-wallet.

E. Trust

Lu et al., (2011); Zhou, (2013) defined "Trust" as a particular opinion of one person to another person to accomplish their responsibility which is considered as a strong factor on financial services that use electronic. The transaction of e-payment is conducted within the expectation of users which explains the users' trust (Tsiakis & Sthephanides, 2005; Mallat, 2007). According to Linck et al. (2006) and Kousaridas et al. (2008), trust will get high result while distrust may prevent having deficit and users can come up with decision whether to trust or not trust the payment system.

Moreover, a study done by Yadav and Madav (2016) indicates that there is a positive effect between trust and behavioural intention on the adoption of new mobile technologies by consumers. However, past study by Slade, Dwivedi, Piercy, and Williams (2015) found that there is negative effect between trust and behavioural intention on mobile payment. This is supported by Wei (2014) who found that there is a negative effect between trust and intention to adopt e-payment. The findings explained that it is important for the facility provider of online transaction, as well as policy makers and banking institutions to guarantee the security of the system to retain consumers' trust and confidence. Hence, service providers should consider this more when they design e-payment features (Wei, 2014).

Trust is considered as one of the significant factors that need to be studied in the context of e-wallet because high level of trust will lead to higher acceptance by consumers towards this new technology payment. Ruminating the importance of trust and the inconclusive findings in e-wallet, it is noteworthy to investigate trust from the context of e-wallet.

F. Perceived Risk

Perceived risk can be defined as “a consumer’s perception about the uncertainty and the adverse consequences of a transaction performed by a seller” (Gupta & Kim, 2010, p. 19). In using a mobile wallet, risk is considered as a critical factor that is associated when using this new technology. Most consumers assume that wallets are more important than mobile phones. However, there will be a huge impact if consumers lost their wallet phone. Risk also can be defined as the loss of stored data, deception of card credit as well as doubt to use new technology (Gefen et al., 2003; Teo and Yeong, 2003).

According to Wu and Wang (2005), a study conducted in Taiwan found perceived risk to have a significant impact on behavioural intention on the usage of mobile commerce. The findings explained that the presence of potential risk makes the consumers more aware because they have a good understanding and experience in dealing with mobile commerce. Even if the consumers want to perform an online transaction, they still can prevent a high risk related to mobile commerce. Furthermore, competitive price, various products, convenience and time saving are the benefits of using mobile commerce and it can attract the consumers to conduct an online transaction even though they perceive several risks (Wu & Wang, 2005).

Hence, it shows that perceived risk is one of crucial factors in determining the result from consumers towards the mobile payment acceptance. Consumers tend to use and get attracted more to mobile payment if consumers think the system is safe and secure to be used in their daily life. Therefore, due to the mixed findings from various studies, it is important to investigate perceived risk in the context of e-wallet. Accordingly, the following hypotheses are proposed:

H1 : There is a positive relationship between perceived usefulness and intention to use E-wallet.

H2 : There is a positive relationship between perceived ease of use and intention to use E-wallet

H3 : There is a negative relationship between perceived risk and intention to use E-wallet.

H4 : There is a positive relationship between trust and intention to use E-wallet.

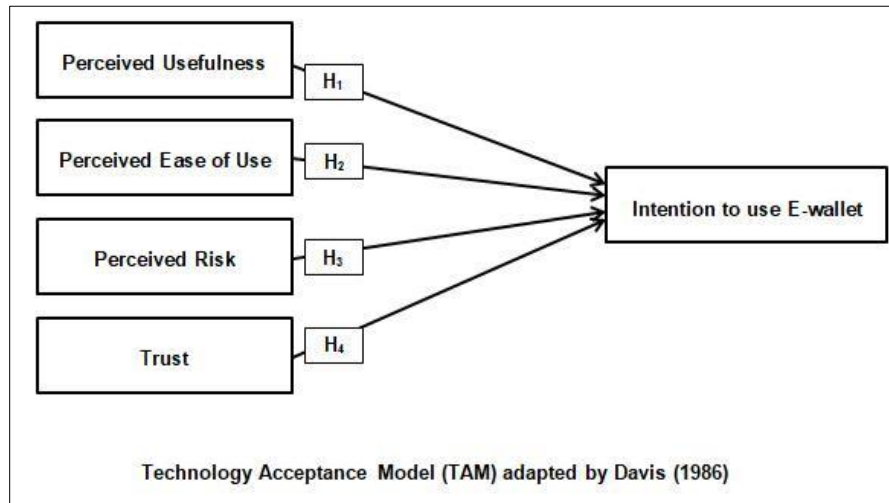


Figure 1: Research Framework

3. Methodology

The chosen target population in this study is youths in Malaysia. The reason for selecting youths for this study is because youths have more knowledge and are exposed to new technology in making payments such as e-wallet. This is supported by Mun, Khalid and Nadarajah (2018) who stated that youths can give a good feedback regarding the technology and can be a potential user of the mobile payment services. According to Norizan Sharif, (2003), The National Youth Development Policy 1997 defines youths as adults between 15-40 years. However, in the article “Khairy: New definition of youth age to be implemented in 2018” (2015), it was reported that The Malaysian Youth Policy (MYP) implemented in 2018 would replace the National Youth Development Policy (NYDP) 1997 and the MYP age limit is from 15 years to 30 years compared to 15 years to 40 years under the NYDP” (para. 7). Therefore, this study will use the range of age between 18 to 30 years old. This study will choose individuals from the targeted population in order to obtain the data. About 250 respondents of youths in Malaysia will be evaluated to get acceptable information and act as back up if there is a mistake by the respondents when completing the questionnaire. As indicated by G Power 3.1.9.2 calculation, the minimum sample for this study is 129 respondents ($f^2 = 0.15$, number of predictors = 4). IBM measurement SPSS Statistics Version 23 and Smart PLS 3.0 are tools that will be used to obtain the results.

4. Conclusions

This study will examine the factors that affect the intention to use E-wallet among youths in Malaysia and review the literature related to perceived usefulness, perceived ease of use, trust, perceive risk. Technology keeps on changing from time to time. Thus, it is not impossible in the future that there will be more advanced payment method introduced to the world. Therefore, it is important to investigate the factors affecting the usage of new

technology payment method. This way, service providers or the government will be able to know the factors that can attract customers to use and adopt the new technology in making payment in the future.

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Guardianship and Custody of Divorced Couple's Children: Welfare of The Children or Best Interest of The Child, A Comparison Study Between Malaysia and Indonesia

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Abstract

There are several unavoidable matters that must be looked into when divorces happened. Properties and children are matters usually contested by divorced couples. Who should take care of the children and where are they going to be brought up are the subjective issues and depends on the circumstances of the individual case. The welfare concept of the child and best interest of the child are the clues that the family court must deal with delicately. The objective of this paper is to determine the application of these concepts by Malaysian law as compared to Indonesian law. This conceptual research paper will significantly indicate as to what extend these two countries successfully apply the theories of child welfare as well as best interest theories. The information gathered from books, articles, magazines and previous researches supported by the statutory and decided case are discussed thoroughly in accordance to recent situations. The Malaysian statutory solution refers to Law Reform Act (Marriage and Divorce) Act 1976 (Act 164), Guardianship of Infant Act 1961 (Act 351) while Indonesian statutory reference are Law No. 23 of 2002 on Child Protection jo. Law No. 35 of 2014 Amending Law on Child Protection and Law No. 1 of 1974 on Marriage. In addition, United Nations Convention on the Rights of the Child (UNCRC) are also discussed in this paper.

Keywords: Malaysia, Indonesia, child custody, divorce, welfare, best interest,

1. Introduction

The term 'child' has various interpretation depending on the statutes concerned. Generally, a child is referred to as a human being aged below eighteen years old. Due to his/her minor age, he/she is considered as unable to decide what is the best for himself/herself. Hence, the parents and guardians are empowered to decide for them as such persons are presumed to be able to decide what is the best for the children. However, in a situation where the parents are lacking of parental behavior or the parents are dead or even the parents are just quarrelling and striving for the custody of their children, the court has jurisdiction to decide which party is entitled to the custody of the child.

2. Problem Statement

Malaysian jurisdictions have been applying the theory of welfare of the child in determining child custody for divorced parents. This is due to the statement in **Section 88(2) Law Reform (Marriage and Divorce) Act 1976** and **Section 11 of Guardianship of Infants Act 1961**. Recently, Malaysia has expanded its jurisdictions beyond the statutory interpretation of welfare. This suggests that Malaysia has start to apply the theory of best interest of the child. However, it seems complicated to differentiate between the theory of best interest of the child and the theory of welfare of the child (Noraini Md Hashim, 2015). In contrary, Indonesian law is more applying best interest theory rather than welfare theory of the child. The court however still applying welfare theory in certain situation.

3. Literature Review

Child can be defined as a young human being below the age of full physical development. The age requirement of a child varies and is subject to any specific legislation and areas of law. For instance, the minimal age of a child to consent differs from the age of a child under adoption or to determine a criminal liability. Therefore there is no definite definition of a child and it has been used for persons under the age of fourteen, sixteen and sometimes eighteen years old.

Art 1 UNCRC defines a child by stating that;

"For the purpose of the present Convention, a child means every human being below the age of 18 years unless under the law applicable to the child, majority is attained earlier".

In Malaysia, definition of child is provided under Section 2 of the **Child Act 2001**. It covers a person under the age of eighteen years and in relation to criminal proceedings, the person must attain the age of criminal responsibility as prescribed under Section 82 of Penal Code; 10 years old.

As comparison, there is still no harmonization in determining the legal definition of a child in Indonesia. Formally and juridically there exists a variety of child age limit, which is formulated according to a variety of laws, such as KUHPerdata (Indonesia's Civil Code), KUHP (Indonesia's Criminal Code), Law Number 3 Year 1997 on Child Court, Law Number 4 of 1979 on Child Welfare, Law Number 1 of 1974 on Marriage, Law Number 39 of 1999 on Human Rights, Law Number 23 of 2002 on Child Protection, and others. Each regulation formulated quantitative child age limit such as 18 years of age, 21 years, 17 years, 16 years, 15 years, or other ages.

DOCTRINE OF BEST INTEREST

Among the important question need to be highlighted in the situation of divorce is with whom will the children live? The court will use all the creativity supported by the evidences given in answering the question. **United Nations Convention on the Rights of the Child (UNCRC)** offers a solution by saying that in the case of a divorce, the custody of the children will be granted to the party who can served the best interest of the child. This is clearly stated in **Article 3 of the UNCRC** which provides that;

“in all actions concerning children, whether undertaken by public or private social welfare institutions, courts of law, administrative authorities or legislative bodies, the best interests of the child shall be a primary consideration.”

There is no standard definition of 'best interest of the child'. Generally, this term refers to the deliberation the court made when ordering which party obtained the right of custody of children. The safety of the child and well-being are among the most considered factors (Pruett, M.K. et al (2000). Geraldine van Bueren, (an international scholar who assisted in the drafting of the UNCRC) interpreted best interest as what is the best for the child in the sense that the decision and policy made by the authority to substitute their own decisions for either the child's or the parents' by taking into consideration the best interests of the child.

ASSESSING THE BEST INTEREST OF THE CHILD

Carbone (2014), Gray (2015) and Prueet (2000) had listed the paramount elements in determining what are the best for the children as below:

1. The emotional ties and relationships between the child and his/her parents, siblings, family and household members.
2. The capacity of the parents to provide a safe home and adequate food, clothing and medical care.
3. The mental and physical health needs of the child.
4. The mental and physical health needs of the parents.
5. The presence of domestic violence in the home.

Unlike Malaysia, Australian legislator has made innovation by setting up the comprehensive best interest checklist in its custody legislation. This checklist considers

the needs, wishes and feelings of the child and young person and this analysis is vital to ensure that the human rights of children are always in the forefront of all consideration (Noraini Md Hashim).

Meanwhile, in Indonesia, the foundational principles of child protection is formulated in Article 2 Law Number 23 of 2002 on Child Protection which follows from the principles of protection contained in the Indonesian 1945 Foundational Law (UUD 1945). The general foundational principles in Law 2002 are: 1) non-discrimination, 2) child's best interest, 3) child's right to live, grow, and develop, 4) valuing child's opinion. As such, the state is obligated to guarantee that children are given opportunities to state their opinion in any adjudication or administrative processes relevant to their rights, directly or indirectly.

APPLICATION OF "BEST INTEREST OF CHILD" IN MALAYSIA

Malaysia has ratified the UNCRC on 17 February 1995 but subjected to several reservations. As regard to the concept of best interest of the child, Malaysia is standing apart of other Convention countries. Hence Malaysia is bound to the doctrine of welfare of the child which is well applied in this country rather than the doctrine of best interest of the child. There are many cases where the judges are in preference to apply the doctrine of welfare of the child. In the case of **NGANG NGUK MOI V. CHEN AI CHOO [2008] 1 LNS 421** Suriyadi Halim Omar, JCA had decided that the interest of the child is given priority in the case of custody. The learned judge held that;

While in Indonesia, **Law Number 23 of 2002** on Child's Protection apply doctrine of child's best interest which stated on **Article 14**; *"Every child has the right to be cared for by his own parents, unless there are reasons and / or rules valid law indicates that the separation is in the best interest of the child and is a final consideration."*

APPLICATION OF "BEST INTEREST OF CHILD" IN INDONESIA

Like Malaysia, applying the doctrine of child's best interest in Indonesia is still in the concept that has resemblance with the welfare of the child. For instance, it was decided in the case of **decision number 336/Pdt.G/2009/PTA.Sby** which judges granted the custody of the child to the mother based on the best interest of the child.

DOCTRINE OF WELFARE OF CHILDREN

Welfare means action or procedure designed to promote the basic physical and material well-being of people in need. Welfare of child refers to the procedure that gives effect to society's responsibility for the well-being of children. It is related to such matter of social security, protection, health, housing, legal aid and social support. The 'main role' of welfare of the child in relationship to the case of custody, guardianship and adoption is to ensure that the child will have the best upbringing conditions in conform with his needs and lifestyle such as suitable accommodation, education, safety, healthy and other elements.

This doctrine is widely applied in the case of custody in which the court will look at the position of both paternal and maternal side and decide which side is more competent to serve the best facility in the upbringing of the child. The child then will be passed to that party. This concept is also applied in non-parental case whereby both parents are incompetent. In that case, the claimant come from grandfather or grandmother or even by government body such as *Jabatan Kebajikan Masyarakat* or other NGOs. The same situation happens in Indonesia.

WHAT CONSTITUTED WELFARE?

There is neither a specific yardstick nor statutory interpretation as to determine what elements are considered as welfare to the child. This word has a subjective determination, vary and it depends on the circumstances of each case. Hence, there are several judgement interpretation defined by the judges as to define the meaning of child's welfare. In the case of **Re F [1969] 2 Ch. 238**, Lord Daries LJ; "welfare of child includes material advantage and inability to provide an adequate home environment is a determining factor".

APPLICATION OF WELFARE IN THE CASE OF CUSTODY IN MALAYSIA

Section 88(2) of the Law Reform (Marriage and Divorce) Act 1976 (LRA 1976) ranking *in paripasu* with **Section 11 of Guardianship of Infants Act 1961 (GIA 1961)** provides that in deciding the custody of the child, the paramount consideration shall be the welfare of the child and subject to this, the court shall have regard to the wishes of the parent and the wishes of the child.

Both statutes are applied for the case of non Muslim in Malaysia. The LRA 1976 is referred in the case of divorced couple only where the trial will also determine the issue of validity of separation of the married couple, issue of maintenance of spouse as well as the issue of child custody. On the other hand, GIA 1961 is referred not necessarily in the case of divorced couples. This statute may be referred in the case where the biological parent claim the right of custody of the child who are in the hands of an incompetent person. It also may happen in the case where the third party (grandfather, grandmother, relatives, body of authority, NGO) claim the right of custody of child who are in the hands of incompetent biological parent.

Section 88(2) of the LRA 1976 provides; "*In deciding in whose custody a child should be placed the **paramount consideration shall be the welfare of the child** and subject to this the court shall have regard (a) to the wishes of the parents of the child; and (b) to the wishes of the child, where he or she is of an age to express an independent opinion*"

This section states that welfare of the children must be the first and paramount consideration and other considerations must be subordinated such as the wishes of the parents and the wishes of the child. In the case where there are two or more children of a marriage, the court shall not be bound to place both or all in custody of the same

person but shall consider the welfare of each independently. In the case of **K SHANTA KUMARI V VIJAYAN [1986] 2 MLJ 216**, Wan Yahya J (later FCJ) applied the welfare of the children as the paramount consideration, having regard to the care, comfort, attention, well-being and happiness of the child and held in favour of the mother being given custody of younger infants.

PehSwee Chin J (later FCJ) in the case of **CHAN BEE YEN v. YAP CHEE KONG [1988] 1 LNS 212; [1989] 1 MLJ 370 HC** and Wan Suleiman FJ, who applied Section 88(2) and affirmed in the case of **MANICKAM V INTHERAHNEE [1984] 1 LNS 90; [1985] 1 MLJ 56 FC** applied the following principles:

1. The paramount consideration is the welfare of the child, but this is not the sole consideration though it is predominant, and subject to this, the wishes of the unimpeachable parent prevail over those of the other,
2. The age of the child (seven years old) comes within the rebuttable presumption that it is good for the child to be with his mother; and
3. The mother did love the child more than the father did, and the child has now represented the only meaningful thing in life to her.

APPLICATION OF WELFARE IN THE CASE OF CUSTODY AND GUARDIANSHIP IN INDONESIA

In Indonesia, for both Muslims or Non muslims, judges decide that the custody of child in Indonesia will give to “mother”. For Muslims, judges apply Article 105 of the Compilation of Islamic Law (KHI), which is it stated that: “In the event of a divorce,

- a. Maintenance of children who have not been *mumayyiz* or are not yet 12 years old is the right of their mother;
- b. Maintenance of children who are already *mumayyiz* handed over to the child to choose between father and mother as the holder of their maintenance rights;
- c. maintenance fees borne by his father”.

While for non-Muslims, the legal basis refers to jurisprudence (previous court decision), as follows:

1. Decision of the Supreme Court of the Republic of Indonesia No. 126 K / Pdt / 2001 dated August 28, 2003 stated that:
“... If there is a divorce, the child who is still underage is supposed to be handed over to the closest and closest person to the child, namely Mother ...”
2. Decision of the Supreme Court of the Republic of Indonesia No. 102 K / Sip / 1973 April 24, 1975, stated:
“Based on the jurisprudence regarding child guardianship, the benchmark is that the biological mother is prioritized, especially for young children, because the child's interests are a criterion, except if it is proven that the mother is not reasonable to care for her child”.

But for some cases, judges do not always apply jurisprudences above or legal basis above. As regulated in Indonesia Law Number 4 of 1979 on children’s welfare, Article 9 strictly states that ; “ *Parents are the first to be responsible for the realization of children's welfare both spiritually, physically and social.*”

While in Article 10 of Law Number 4 of 1979 on children’s welfare states that;

(1) Parents who are proven to neglect their responsibilities as referred to in Article 9, resulting in the emergence of obstacles in the growth and development of children, revocation of foster power as parents to his child. In that case the person or body is appointed as guardian.

(2) Revocation of foster power in paragraph (1) does not abolish the obligation of the parents concerned to finance, accordingly with his ability, livelihood, maintenance, and education his child.

(3) Revocation and return of parental care is determined with the judge's decision.

(4) The implementation of the provisions of paragraph (1), (2) and (3) is regulated more continued with Government Regulation.

One of case is in decision of Religious district court No. 881/Pdt.G/2008/PA.JB, case of Mohammad Arief and SurvitaWidiyanti which in the verdict stated that Survita often refused to fulfil marital obligations, she often leaves their children while her husband is working, they even have separate residence since the 14th August 2008, and Survita had affairs with Non Muslim men. So it was clear from the case that Survita was not eligible for rights to bring up their children. One of the requirements for a person entitled to receive this right is trustworthy and moral.

In spite of article 105 has regulated that child care rights are not yet *mumayyiz* (adult) or 12 years old is the right of his mother. And inside Article 49 Law no. 1 of 1974 explained that the right to power for child care by each party can be withdrawn by other parties if: 1) she greatly neglect her obligations to her children; 2) Her behavior is bad. The negligence and irresponsibility of the wife as the mother made it the panel of judges dropped the custody of his father in decision **No. 881 / Pdt.G / 2008 / PA.JB**. In addition, psychological considerations and benefit of children which is indeed a major consideration in giving custody is a reference for the panel of judges.

Different with previous decisions, there is decision that guardianship and custody of child is given to child's grandmother. It is in Religious Supreme Court of the **Republic of Indonesia No. 372 K/Pdt/2008**. The consideration of judge is currently the whereabouts of child's mother are unknown and existence of an underhanded deed that has been legalized in the form of a statement by JelyNonny, states that Jelly Nonny ; Mother of Cindyana, Melvina and Ricky Wijaya will not bring these children if divorced from Suwandi Alain Wijaya (The Deceased), in other words that the underhanded deed in the form of this statement is the same as an authentic deed.

EXECUTION OF COURT DECISIONS ON CUSTODY OF CHILD IN INDONESIA

In field, execution of decisions on custody of child is not running well. Both of father and mother of child not accepted it even it is for "best interest" or "welfare" for their children. Such as what happened at **Bojonegoro**, East Java, Indonesia, when a boy who was only 2 years old was the victim of a legal case for the fight for custody due to the divorce of his parents. The boy was executed by the Bojonegoro Religious Court from his biological father to his biological mother.

APPLICATION OF WELFARE IN THE CASE OF GUARDIANSHIP

Section 11 of the Act provides that; *“The Court or a Judge, in exercising the powers conferred by this Act, shall have regard **primarily to the welfare** of the infant and shall, where the infant has a parent or parents, consider the wishes of such parent or both of them, as the case may be”*.

The application of **Section 11** of Guardianship of Infants Act 1961 is discussed in **CHEN AI CHOO V. NGANG NGUK MOI** [2007] 3 CLJ 488 where the court decided to hand the child back into custody of the plaintiff, the natural mother as the court was of the view that it was in the best interest of the child. The reasons are as follows:

- i) no evidence was produced by the defendant to demonstrate that there may be factors present that would make the plaintiff unfit in her role as a mother.
- ii) the child will have better access to her natural father who lives just across the causeway in Singapore.
- iii) the court took into consideration the fact that the child is a female of tender age and would benefit from the care and affection that will be afforded to her by her natural mother.

Section 5 of Guardianship of Infants Act 1961 has been amended in 1 October 1999 with gives effect to the equality between father and mother in the case of guardianship of child. In other words, after the amendment, the word ‘parent’ is now refer to both father and mother and thus both father and mother may be given joint guardianship. The court has to regard primarily to the welfare of the infant and the wishes of the infant’s parents simultaneously.

Low Hop Bing J in the case of **JENNIFER PATRICIA THOMAS v CALVIN MARTIN VICTOR DAVID** [2005] 7 CLJ 133 held that *“In relation to the custody or upbringing of an infant; a mother shall have the same rights and authority as the law allows to a father, and the rights and authority of mother and father shall be equal”*.

In this case, the court order for joint guardianship of the children but the daily custody, care and control of the children shall remain vested in the wife. The father is allowed to have weekly overnight access of the children and alternative overnight access to the children during festivals and birthdays.

FINDING : DOCTRINE OF BEST INTEREST OF CHILD VS DOCTRINE OF WELFARE OF CHILD

Basically, doctrine of child’s best interest and welfare of the child carry the same objective in which it is a paramount to consider the child is having an excel and good upbringing. The court has the duty to scrutinize this matter thoroughly before the order of custody is granted. What can be concluded is best interest of the child covers wider application compared to the concept of child’s welfare. The latter is more concerned on the matter of the custody of the child in family or domestic litigation. Thus, the parental competency becomes the utmost consideration as to determine which party is entitled to take care of the child.

Best interest of child concept on the other hands concern to the matter other than domestic custody cases such as in the matter of punishment of the child, medical issue,

property proportion and so on. In the case of **F v R (1983) 33 S.A.S.R 189**, the Chief Justice Kiy held that; *“the duty of the doctor to act in what he conceives to be the best interests of the patients is to be considered together with the right of the patient to control his own life and to have information necessary to do so”*.

In the first place, Malaysia still applies the welfare concept in all cases but recently it starts to expand the application of best interest including cases related to the custody of child as promoted by UNCRC (Roslina Che Soh, 2015 and FadzlinaNawi, 2009).

The Judge in the case of **CHEN AI CHOO V. NGANG NGUK MOI [2007] 3 CLJ 488** highlighted that there are resemblances in the elements of both best interest and welfare of child. The elements can be clearly seen in the table below:

Table 1: element of welfare of child vs element of best interest of child

Best Interest	Welfare
K SHANTA KUMARI V VIJAYAN [1986] 2 MLJ 216	Carbone (2014), Gray (2015) and Prueet (2000)
care, comfort, attention, wellbeing and happiness of the child	1. The emotional ties and relationships between the child and his/her parents, siblings, family and household members. 2. The capacity of the parents to provide a safe home and adequate food, clothing and medical care. 3. The mental and physical health needs of the child. 4. The mental and physical health needs of the parents. 5. The presence of domestic violence in the home.

The elements of care, comfort, attention, wellbeing and happiness prescribed as welfare are the resemblance of the five elements of best interest of a child. The elements can be applied interchangeably. For example, the value of care and comfort under welfare principle reflect the value of wishes and feeling of child under the principle of child's best interest.

Decision of the Supreme Court of the Republic of Indonesia No. 102 K / Sip / 1973 April 24, 1975, states that: "Based on the jurisprudence regarding child guardianship, the benchmark is that the biological mother is prioritized, especially for young children, because the child's interests are a criterion, except if it is proven that the mother is not reasonable to care for her child."

4. Research methodology

There are three main methods that have been applied in collecting and analysing the data and information for this paper namely search engine, databases, and books. The first method involved is search engines, specifically Google and Google Scholar. The most frequently inserted keywords are 'best interest of child' and 'welfare of the child' in both Malaysia and Indonesia. The second method used is databases pertaining to best interest of child and welfare of the child issues. Among the databases used are Irish Journal of Applied Social Studies, Journal of Law & Family Studies, and Jurnal Undang-undang dan Masyarakat. Most of the articles retrieved from those databases are related to the jurisdiction and legal issues. Finally, related books are fully utilised in gathering information for this paper. In addition, dictionaries are also used as main reference in providing definitions of terms related to this paper.

5. Conclusion And Recommendation

UNCRC applies the doctrine of best interest of the child in all fields governing the affairs of the child. Being ratified of the convention, states like United Kingdom, Saudi Arabia, India and other countries have already applied the concept of best interest in the matter concerning of the child.

Malaysia on the other hand is much concerned on the doctrine of welfare of the child rather than best interest. This principle clearly expresses the main statutes relating to the issue of custody and guardianship as provided by Law Reform Act (Marriage and Divorce) Act 1976 (Act 164) and Guardianship of Infant Act 1961 (Act 351). However, Malaysian's courts do not reject the principle of best interest of child in total. From time to time, Malaysia has started to apply the doctrine of welfare of the child and best interest of the child in dual and even in some cases, Malaysian courts have independently applied best interest doctrine solely. This approach is considered a golden in the eyes of legislature whereby the law must be interpreted in the wider approaches so that justice can be uphold. What is meant by the best interest of a child considered by judges are actually the resemblance of the elements prescribed under the welfare of a child.

Therefore, it is highly recommended that Malaysian legislators will consider to incorporate the principle of best interest of child into LRA and GIA for the prosperity and benefit of child. The incorporation will then be parallel with the UNCRC's provision with regard to the custody of children.

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Factors Influencing Brand Awareness of Feminine Hygiene Products among Young Female Adults

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Abstract

This paper studied the effects of distribution, pricing, advertising and brand activation on brand awareness among young female adults. Data from 100 respondents were analyzed using descriptive, correlation and multiple regression analysis. Empirical results authenticated that brand activation significantly affects brand awareness. Input regarding the effects of distribution, price, advertising and brand activation on brand awareness among respondents would be crucial in helping marketers formulate strategies to enhance their brand, obtain competitive advantage and business sustainability among young consumer markets. Empirical findings offer academic contributions to the existing body of knowledge of consumer behavior. The findings indicated price and advertising as significant towards brand awareness.

Keywords: Females, feminine hygiene products, brand awareness, roadshows.

1. Introduction

There is a wide variety of feminine hygiene products (FHP) sold at retail outlets in Malaysia that comes with its own brand name and it will have its own unique selling proposition to provide the best FHP for women. Customers have their own preference in choosing what type of brand to use. Some preference towards FHP can be the features, price or social influence that leads to what brand to use. Promotional activities can help the retailers to get close to the customers and understand their needs. It can also help in increasing their awareness towards the brand itself.

2. Problem Statement

Popular brands have carried out promotional strategies such as brand activation, sales promotion, sponsor for a local movie and offer premiums in order to gain new customers and retain existing ones. However, the number of sales of FHP keeps dropping and failed to meet their sales target. Thus, a preliminary interview was conducted with several respondents in order to gain the information related with these issues. From the feedback, most of them are not interested in roadshow activities since they have no fun factors. There are no games conducted or celebrities invited to make them interested in visiting the brand's booth. Other than that, the booth location is not strategic enough, making it difficult to be noticed. In addition, students will not go to a site sale if they do not know what booths are available there. Hence, this study attempted to fill in the gaps by providing a theoretical and practical perspective about the relationship between distribution, price, advertising, brand activation, brand awareness and factors affecting brand awareness of FHP among female university students.

University roadshows is one of the brand activities in order to enhance brand activation among customers. The roadshows' objective is to approach as many female students as possible because it is easier to influence them about hygiene and to make them be aware about the brand. It is also much easier to interact and to introduce new products to the students. Price discounts and free mechanics are also given to everyone who purchased their products in order to stimulate customer's purchasing behavior. Unfortunately, product choices offered at roadshows are limited and customers have difficulties in making a purchase if they want other product choices. In addition, customers also face difficulties to purchase stock keeping units (SKU) based on their preferences since what they want is not always available during the roadshows.

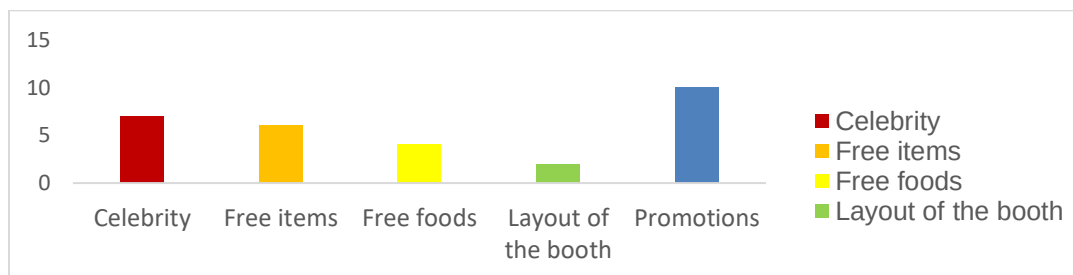


Figure 1: Factors that influence students to visit the booth

3.0 Literature Review

3.1 Distribution

A brand is deemed strong in the market and has many consumers if it has the widest distribution. Huang & Sarigöllü (2012) stated that a more intensive brand distribution leads to greater awareness among customers. Since FHP is a fast-moving consumer good, manufacturers will use an intensive distribution strategy to distribute the products as it is cheaper and more effective to reach out to customers.

3.2 Price

Some customers will look for a lower price product compared to other customers that choose quality over price as these types of customers will have a perception that high price products are of high quality (Memon, Arif, & Lecturer, (2016) Memon et al., (2016), Shahid, Hussain, & Zafar, (2017). Likewise, there are also customers who are price sensitive and therefore they will tend to compare between the prices and choose the most affordable price of FHP available. This popular brand is offered its product at a higher price compared to other brands, but it is also known for its high-quality.

3.3 Advertising

Advertising helps to increase brand awareness and most customers will be influenced by the advertisement shown by the brand. Each advertisement must be unique and able to catch the attention of potential customers. Powerful commercial also encourages the association to build the mindfulness about a brand (Chi, Yeh, & Yang, 2009) and good and effective advertisements can increase awareness of a brand (Shahid et al., 2017).

3.4 Brand activation

Promotional activities such as roadshows, exhibitions, awareness campaigns (Islam Sutirtha, 2012), sales promotions, advertisements, sponsorships and events that can catch the consumer's attention is considered as brand activation (Chi, 2009). The purpose of activation is to create consumer experience towards the brand during a selected event. Promoters can explain more regarding the products especially if they can persuade the consumers to purchase their products. Many activities can be done during activation to assist in gaining more attention and increase the number of audiences. Likewise, sponsorships can create product awareness especially if the event is related to the brand. Through activation, the company can highlight their brand as well as align with the purpose of the product. Thus, brand activation is the cheapest way to interact with consumers and increase brand awareness.

3.5 Brand awareness

As indicated by Chi et al (2009), brand awareness is a consumer's ability to recall and recognize a brand in different situations while Svensson (2005) mentioned that to increase brand awareness, retailers should increase the familiarity of the brand through brand exposure. Brand recognition occurs when a consumer can identify or spot the brand in a store based on what they saw in the advertisement. Meanwhile, recall is when a consumer can recall any memory that they gain when purchasing any specific item. In addition, Chi et al (2009) revealed that brand recall and brand recognition are the elements of brand awareness. When consumers see a product, they can identify and recall a brand name of the product perfectly. Once the companies had achieved brand awareness from the customer, it shows that the brand has a stronger image and has competitive advantage.

4.0 Research methodology

Quantitative research method was chosen to obtain data for this research. Convenience sampling technique has been chosen and the respondents are female students who passed by the brand's booth on the day of the event. Regression analysis is used in order to identify the relationship between independent variables which are distribution,

price, advertising, promotional activities and the dependent variable which is brand awareness.

Table 1: Reliability Statistics

DISTRIBUTION	PRICE	ADVERTISING
Cronbach's Alpha 0.801	Cronbach's Alpha 0.726	Cronbach's Alpha 0.875
BRAND ACTIVATION		BRAND AWARENESS
Cronbach's Alpha 0.821		Cronbach's Alpha 0.739
No of items for every variable = 5		

Table 1 shows the Cronbach's Alpha where the acceptable alpha coefficient should be in the range of 0.7 to 1.0. When testing for reliability, the researcher did not delete any item in the variables used such as distribution, price, advertising, brand activation and brand awareness as the initial outcomes already exhibited an acceptable alpha coefficient in the reliability analysis. Brand awareness is indicated as good for the reliability analysis based on the Cronbach's Alpha rule of thumb, which is the same for the rest of the variables which are distribution, price, advertising, and brand activation as the results is between 0.7 to 0.8. In addition, from all the variables, advertising and brand activation are in the highest scale which is 0.8 (good). It clearly shows that all the questions that are used in the questionnaire are reliable and able to represent the variables.

Table 2: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Brand_awareness	100	1.80	5.00	3.9700	.68953
Distribution	100	1.00	5.00	3.9620	.64429
Price	100	1.00	5.00	3.2840	.84144
Advertising	100	1.00	5.00	4.0540	.62010
Brand_activation	100	1.40	5.00	3.9160	.67819
Valid N (listwise)	100				

Table 2 shows the value of mean for brand awareness (3.9700), distribution (3.9620), price (3.2840), advertising (4.0540) and brand activation (3.9160). These values represented the response from the students who answered the questionnaire on the scale of 1 (strongly disagree) to 5 (strongly agree). It shows that the respondents understand the statements in the questionnaire. Overall, the respondents agreed that all variables or factors that were chosen are important and relatable to brand awareness. Thus, it can be derived that the highest mean is cumulated by advertising which is 4.0540 and the lowest mean is cumulated by price which is 3.2840.

Table 3: Correlations of Purchase Intentions and The Four Factors

		BRAND AWARENESS	DISTRIBUTION	PRICE	ADVERTISING	BRAND ACTIVATION
BRAND AWARENESS	Pearson Correlation	1	.111	-.462**	-.104	.194
	Sig. (2-tailed)		.442	.001	.472	.178
	N	100	100	100	100	100
DISTRIBUTION	Pearson Correlation	.111	1	-.140	.748**	.558**
	Sig. (2-tailed)	.442		.332	.000	.000
	N	100	100	100	100	100
PRICE	Pearson Correlation	-.462**	-.140	1	-.039	-.067
	Sig. (2-tailed)	.001	.332		.790	.644
	N	100	100	100	100	100
ADVERTISING	Pearson Correlation	-.104	.748**	-.039	1	.535**
	Sig. (2-tailed)	.472	.000	.790		.000
	N	100	100	100	100	100
BRAND ACTIVATION	Pearson Correlation	.194	.558**	-.067	.535**	1
	Sig. (2-tailed)	.178	.000	.644	.000	
	N	100	100	100	100	100

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

Based on the test that has been conducted, all the variables have low correlation with brand awareness. Price has the strongest correlation with $r=0.462$. Next, correlation results for brand activation, distribution and advertising shows little if any correlation with brand awareness represented by $r=0.194$, $r=0.111$ and $r=0.104$. The results analyzed indicated that brand awareness can be improved and enhanced with other elements or variables other than distribution, brand activation and advertising. In addition, all the independent variables can be seen to have negative relationship with the dependent variable which is brand awareness. The findings indicate that brand awareness is dependent on those variables which are distribution, price, and advertising and brand activation. The result shows that the strongest factor influencing brand preferences of FHP is price with a correlation factor of $r=0.462$.

5.0 Conclusion

5.1RO1: To identify the factors affecting brand awareness of FHP among female students.

Table 4: Table of Coefficients

Model	Unstandardized Coefficients	Standardized Coefficients			
	B	Std. Error	Beta	t	Sig.
(Constant)	4.881	0.742		6.580	0.000
Distribution	0.253	0.221	0.223	1.141	0.260
Price	-0.364	0.106	-0.429	-3.439	0.001
Advertising	-0.490	0.215	-0.433	-2.274	0.028
Brand activation	0.289	0.161	0.272	1.795	0.079

Four variables of brand awareness that have been tested are distribution, price, advertising and brand activation. From the results, only two variables that are significant towards brand awareness as they have a p-value of less than 0.05 which are advertising and price while two other variables that are not significant are distribution and brand awareness. Then, in terms of Reliability Analysis, Cronbach's Alpha has determined that all variables are positively correlated to each other as all have a value of more than 0.7.

Based on the descriptive statistics conducted by the researcher, the results indicated that the value of mean for distribution, price, advertising and brand awareness showed a positive value (above neutral) as all variables obtained more than 3.00. This means that the respondents agreed that all variables chosen are important and related to brand awareness. Next, for correlation coefficient analysis, all variables used towards brand awareness have a negative relationship with the dependent variable. This indicated that brand awareness is dependent on those variables which are distribution, price, and advertising and brand activation. Results from the correlation test can determine the size of correlation coefficient for each variable between each other. As for the model summary (R Square) which is 32.1%, it can be concluded that only 32% of changes in the dependent variable can be explained by all independent variables chosen. The remaining 67.9.0% cannot be explained due to omission at some other variables.

The findings also derived the coefficients level that each variable has with brand awareness. Previously, it showed only price and advertising are found to be significant with brand awareness while the other two variables which are distribution and brand activation are not significant because the p-value is more than 0.05. Besides that, the table of coefficients can also point out the type of relationship that each of the variables has towards brand awareness which is seen at the unstandardized coefficients value. The variables that have the highest value in B (Beta) can be concluded to have a strong relationship between dependent variable and independent variables as the highest value is advertising and followed by price. Thus, factors affecting brand awareness of FHP are price and advertising as they have a significant p-value with brand awareness which is 0.001 and 0.028 respectively. As for distribution and brand activation, they must be rejected as they have an insignificant p-value which are 0.26 and 0.079 respectively, whereas it should be less than 0.05 ($p < 0.05$) for it to be significant.

Reasons why price and advertising have a p-value that is less than 0.05 are related to brand awareness. Svensson (2005) stated that, one of the most important factors that make a consumer choose a product is price but there are also consumers who focus more on the quality of the products rather than price. This brand offers FHP at a slightly higher price compared to other brands, but customers still choose this brand due to its high-quality products. Since millennial's main information source is social media and internet, it is crucial for any organization to keep up with the trend by using this media for advertising. It is the easiest, cheapest and fastest way to reach out to the audience. However, for the insignificant variables such as distribution and brand activation, there is a reason why the result of p-value is more than 0.05. Svensson (2005) stated that, a strong brand can give more influence on the distribution channels. Thus, it is vital for a fast-moving consumer goods category to have access in store as consumers will not go to other stores to search for their preferred brand. Instead some will purchase any brand

that is available. Unfortunately, this brand is only distributed to selected petrol stations that have a higher traffic which may result in them losing some consumers.

The final factor is brand activation or known as outdoor advertising. Activation has become significant due to its potential to reach many consumers who are prone to social media (Till, 2018). If news regarding the brand's activities and campaigns are not posted on social media, it will not reach many audiences. Customers tend to search the social media for their favorite products' recent updates and news. Thus, by updating important news on social media it will gain and reach a larger number of audiences. This popular brand conducted university roadshows, but they did not provide updates on the roadshows' schedule on their social media. Thus, they need to update more on their activities on any social platforms that can easily reach the consumers and choose perfect timing to hold the roadshows. In conclusion, this study discovered that advertising has the highest impact towards consumer brand awareness, followed by price.

5.2. RO 2: To identify the main factor affecting brand awareness of FHP among female students.

As indicated from the findings, all variables have their own significance level towards the dependent variable which is brand awareness but only price and advertising are significant to brand awareness while distribution and brand activation are proven otherwise. Therefore, distribution and brand activation should be eliminated as the factors affecting brand awareness on FHP among female students. In addition, among these two significant variables, advertising is the main contributing factor affecting brand awareness for FHP. This is because advertising has the highest standardized coefficients with brand awareness with Beta = (-0.49) in value followed by price with Beta = (-0.364) in value. Price is also proven as the most contributing factor affecting brand awareness on FHP because consumers tend to look at a product's price before purchasing it. Anyone that prefers product quality rather than its price would choose this popular brand. In conclusion, people will choose product quality over product price.

5.3 Recommendations

I. Widely distribute the products to retail stores like petrol stations and convenience shops. It may not be very profitable, but it helps to gain sales especially for customers who are in an emergency to purchase FHP. Once they could not get their desired brands on the shelves, they may choose another brand and then stick to it. If the product is available in shops in rural areas, it will help to increase the consumer brand awareness.

II. Do aggressive promotion during brand activation whereby this brand supplier should conduct more roadshows because it helps to gain new customers and to reach target sales. They should rent or buy mobile vehicles and set up the layout in the vehicle to help the company get ready their booth quickly. It is also efficient and cost saving especially if the schedule is at East Coast. The mechanics or free items that they give with every purchase should be changed. Different promotional tools that are offered with every purchase help to bring more customers to purchase it since satisfaction of a customer is important to influence customer loyalty to a brand for a long term relationship (Ranabhat, 2018). Since competition between brands are very high, using

sales promotional tools help to influence individual buying behavior towardsthe brand (Ranabhat, 2018).

III. Create more awareness on safety standards among Malaysian FHP users as there is a standard requirement for health and safety products for consumer as mentioned in Part III of Consumer Protection Act 1999. Section 19 (1) of the Act provides that the Minister may by regulations prescribe the safety standards in respect of any goods or class of goods; and (b) any services or class of services, and may prescribe different safety standards for different goods or services, or classes of goods or services.

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Adoption of Digital Forensic by Malaysian Large Enterprises : A Conceptual Framework

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Abstract

The increased use and dependency on ICT and technological advancement have caused a big challenge to today's businesses and modern organization. This paradigm has seen the rise in the statistics of cybercrime and digital incidents cases involving major losses and collapse of businesses and firms. In addressing and preparing the organisation for incidents of this nature, the adoption of digital forensic (DF) is necessitated. However, the adoption of DF in Malaysian organisations is unfavourable. This study reviewed the literature to identify the probable factors that influence organisation's decision to adopt DF and proposed a framework for an in-depth investigation into possible factors influencing the adoption of DF in an organisation. In doing so, possible policy and academic implications will emerge which form the basis for implementation and further study.

Keywords: Digital Forensic, Digital Forensics Adoption, Integrated Model, Malaysia

1. Introduction

A great reliance upon information technology by most modern businesses has prompted not only a vast technological advancement but also sophisticated forms of associated risks and crimes. The technology abuse perpetrated from both internal parties in the organisation and external sources namely clients, suppliers and service providers may exposed related businesses to various threats of cybercrime and digital incidents that later leads to serious business disruption. This issue is supported by a fact that the cybercrime rate is surging globally and has become a bold concern to eight global economies namely USA, Germany, Estonia, Japan, Holland, Switzerland, Singapore and Malaysia (Jay, 2018). In a context of Malaysia, over 2100 servers owned by business, banks, universities and public agencies were compromised for unauthorized manipulation of computer data activities (Sarah et al., 2018). Pertaining to this, computer related fraud such as network intrusions and hacking, phishing and farming (fraudulently acquiring sensitive information)

was presented as the most committed incidents. The rise of this incident has caused a great effect against organisations namely loss of valuable and sensitive data (Rowlingson, 2004), organization's reputational damage (KPMG, 2013; Sommer, 2009) as well as financial loss (Elfadil, 2013; Mankantshu, 2013; Mushtaque et al., 2014). In addressing this issue, digital forensic (DF) has been recognised as an effective tool for businesses to react, respond and dissolve into any occurrences of computer related fraud (Aswami, Jill, & Husin, 2012; Garfinkel, 2010; Mohay, 2005). Despite of these great benefits of DF, this technology is slightly adopted by today's organisations and businesses (Elyas et al. 2015; Suhaila et al., 2011). Subject to this, lack of comprehensive understanding as a coherent direction to help organisations to get prepared and making decision to adopt DF was found to be their challenge. Therefore, this study aims to review the literature on the organisation's adoption of DF and to propose a framework for an insights investigation into the factors affecting the organisational decisions to adopt DF by Malaysia large enterprises. To meet this objective, this paper brought the discussion into four parts. The next section will review the literature on adoption of innovation, Malaysia large enterprise and DF. Section three proposes the framework and conclusion is made in section four.

2. Conceptual Overview

Innovation is contended as a complex phenomenon as vibrant attention given to this research area at variant perspectives. In a general view, Innovation is justified as any forms of new technology, process, or even an idea or product either in technical and administrative, or radical and incremental that are being introduced into an organisation and to be adopted (Rogers & Shoemaker, 1971; Zaltman et al., 1973; Cooper & Zmud, 1990). At this point, innovation adoption promising a tremendous impact on organisational change (Michael, 2015) by encompassing the potential benefits of helping an organisation to deal with the current issues and challenges. As such, in terms of this study, innovation adoption refers to the decision of an organisation to admit DF to be used as a new specialized technological process in facilitating their task. DF was highlighted by previous researchers as a new investigative methodology applied in a digital technology in which depends on the development of new forensics tool to gain a high quality investigation outcome (Mark Pollit, 2010; Mohay, 2005). Large enterprises nowadays used information technology (I.T) to not only in operating their business effectively but also more appropriately to remain competitive in the industry. The optimization of information technologies usage has placed the modern enterprises into an extremely enormous technology buy in budget as well as to possess a better security of I.T to safeguard their valuable resources and to keep their good reputation. As there is an increase of electronic financial and informative transactions offers to the stakeholders in facilitating the business environment, these electronic operations is dependent over stable security to create safe environment. This has become a big concern of the organisations that are responsible to provide a trusted and safe business environment. However, in spite of all the vital and feasible measures taken to prevent the pre-occurrences of a cybercrime there is also a mandatory requirement for the organizations to consider and commit with the preventing measure for post, active and reactive crime occurrences namely DF. DF is the practice of scientifically derived and proven technical methods and tools towards ability of an organization to maximize its environment's ability to collect, preserve and use the legally reliable digital evidence when necessary (García, 2005; Rowlingson, 2004; Tan, 2001). According to Hoolachan & Glisson (2010) an organisation can prevent the occurrence of the incident by preparing the environment in advance and in doing this, organisations will

benefit not only in instances where prosecution becomes an issue, but also in limiting their own business risks. In fact underrating the need for DF might adversely affect the organizations to link the attacker to the security incident or lack sufficient evidence to prove a fraudulent transaction (Mankantshu, 2013). Nevertheless, the importance of DF is not fully aware. Elyas et al. (2015) presented less than 2% of Australian organizations have a plan for DF as reported by Australian Institute of Criminology (AIC). According to Australian Institute of Criminology (AIC) even though the DF is emphasize as a legal and regulatory requirement in most western country jurisdictions, smaller in number of an organization have developed a significant capability in this domain (Elyas, Ahmad, Maynard, & Lonie, 2015; Elyas et al., 2014; Endicott-Popovsky & Frincke, 2006; Grobler et al., 2010). Meanwhile, Suhaila et al., (2011) has brought the same issue where in her study it was found that most all organisations have not developed the DF capability in their operations. In Malaysia, the capability of DF initiatives is still relatively new, and more awareness and promotion programs have to be devised in order to educate the organizations (Aswami & Izwan, 2008). This scenario was seen as a bedrock to this problem as lack of coherent understanding and guidance on DF practices is found to be the causal of the unfavourable adopting nature of DF among the organizations (Elyas et al., 2015; Mouhtaropoulos et al., 2014). As a consequence, a research on the factors that affect the adoption of DF in organisation and businesses would be crucial in determining the required strategies to elevate their understanding and evaluation of DF adoption.

3. Conceptual Research Model

The conceptual model was formulated based on extensive review of existing research works within innovation adoption in organizational level. Owing to the limited studies prior to DF adoption, a review of previous research works was extended to variant innovation adoption literature to compliment the limitation in order to extract the possible constructs for the purpose of the proposition of potential factors that influence the adoption of DF by Malaysia large enterprise so that, it can be executed for conceptual model development. As a result of the review, the influence of environmental factors, organisational factors and technological factors as well as human factors in organisational adoption decisions have been noted (Choudrie & Dwivedi, 2005; Frambach & Schillewaert, 2002; Zhu et al., 2006). Additionally, the review on previous research on DF at organisational level also demonstrated human (Barske, Stander, & Jordaan, 2010; Grobler et al., 2010; Saleh, 2013), technological (Elyas et al., 2015; Elyas et al., 2014), organisational (Barske et al., 2010; Elyas et al., 2015, 2014; Grobler et al., 2010; Mankantshu, 2013) and environmental factors (Cassandra, 2016; Elyas et al., 2014; Hamdi, 2011) were commonly and frequently considered by the previous researchers as significant factors in the development of models of their studies. These aforementioned factors reflect the basic premise of the TOE framework on the three flexible and generic contexts (Zhu et al., 2006) as well as HOT-fit model. Thus, it is feasible to apply the human-technology organisation environment (HTOE) framework to determine the potential variables of the study. These findings inadvertently support the decisions of the study in adopting HOT-fit model and TOE framework in the context of the adoption of DF. Technology-Organisation-Environment framework (TOE) has been identified as the most appropriate foundation for studying all types of innovation adoptions as the framework representing the three influential factors that effectively lead to the organisational adoption decision (Oliveira & Martins, 2011). As argued by some researchers, it is better to have an integrated theory than a single theory to imply different innovation types (Hosseini et al., 2015). Hence, an integrated approach

of theories is applied to provide better improvement of prediction and elucidation of the resulting model developed. However, this proposition is subjected to empirical findings and therefore the study proposes an in-depth research approach through further literature review as well as pre-coded research instruments and hypothetical testing. Figure 1 shows the proposed framework.

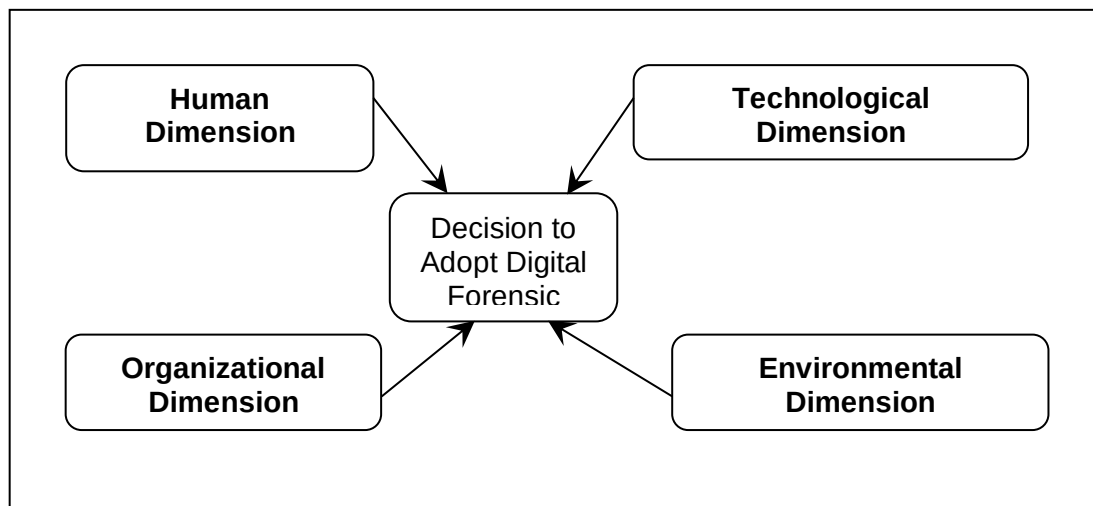


Fig.1 Conceptual Research Model

4. Conclusion

In dealing with a wide range of cyber threats and digital incidents which have recently demonstrated a rapid surge across the globe, it is therefore important for today's organisations to recognise the importance of DF in their organisational environment. It is essential to cultivate the modern organisations to actualise the effectiveness of this technology to be adopted in facilitating the modern organisations to gather and secure an admissible and lawful production of digital evidence through a conduct of digital investigation (Aswami, 2012; Kruse and Heiser, 2002; McKemmich, 2002). In this case, DF serves as a tool that helps an organisation to determine the root cause of an incident which takes place from the cybercrime activities. Therefore exploring the factors affecting the adoption of DF by Malaysia large enterprises is significant to be conducted as the current study is expected to contribute to a suitable framework that works to help the organizations and businesses to understand the key factors that affects the evaluation of DF in their operational environment. This attempt was supported by Grobler et al. (2010) who noted that, there is a need for organisations to have a suitable framework that will assist them in adopting DF. In order to ensure the achievement of the adoption, organisations need to first comprehend the factors that critically affect the determination of DF adoption. In conclusion, this study proposes an in-depth study using primary data source to describe the influences of technological dimensional factors, environmental dimensional factors, organisational dimensional factors, and human dimensional factors to help them in allocating the resources when it comes to considering the decision of adoption on innovation such as DF. It is therefore suggested a case study approach provided the need strategies to achieve this objective.

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The Implementation of The Promotion Mix on Cash Waqf Collection

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Abstract

The cash waqf collection requires a strategic step in its improvement. One of the strategies is the promotion mix. Promotion mix is not only for profit-oriented organizations but also for non-profits. One of the waqf institutions that managed to raise waqf funds and have productive waqf programs is the Al AzharWaqf Institution. They fund their productive waqf programs used cash waqf. Therefore, the process of collecting cash waqf is important. The purpose of this study was to analyze the implementation of the promotion mix for collecting cash waqf at the Al AzharWaqf Institution. The interview technique is used to obtain primary data, then analyzed through a qualitative methodology approach. The results of the study indicate that the Al AzharWaqf Institution used a promotional mix in collecting cash waqf. The promotion mix includes both direct and indirect promotions that are used to inform productive waqf programs to the *waqf*.

Keywords: Promotional Mix, Collecting, Cash Waqf.

1. Introduction

National Development Planning Agency (Bappenas) in 2015 published the Indonesian Islamic Financial Architecture Masterplan which stated that there were nine problems related to waqf. One of the problems was collection cash waqf, the realization of cash waqf still not yet significant if compared with its potential. The other problem was the socialization of waqf program especially cash waqf still low so the awareness of society in cash waqf still less (isefid.id). Hardinawati and Mughnisari (2015) said that one of the important factors that influence cash waqf collection was most of the people lack cash waqf understanding. This happened in the community because of lack of socialization about cash waqf. They thought that waqf only for immovable assets only. So, the socialization about cash waqf to society very needed. The socialization programs could be conducted by the Indonesian Ministry of Religion, BWI, Sharia Bank, National Sharia Board- Indonesia Ulama Council (DSN-MUI), Authority Financial Services (OJK) and Nazhir (Asrori, 2013); Muntaqo, 2015; Witjaksono, 2016).

Socialization is one form of marketing strategy, it is not only needed for profit-oriented institutions but also non- profit institutions. They used that strategy to achieve their goals. And also to finance the operation of the organization and improve their performance (Mano 2010).

One of the non-profit institutions that manage cash waqf is the Al AzharWaqf Institution. This institution has a productive waqf program that aims to alleviate poverty, about 90 percent of the profits earned are used for poverty alleviation empowerment programs. This institution collaborates with the Al AzharAmil Zakat Institution (LAZ). In 2017, the beneficiaries of productive waqf consist of (Al Azhar Document, 2017); 400 Moslems corpse get free services every year, 500 students in a 3rd high school class in 10 provinces per year get special scholarships, 240 students are ready for work per year got full-boarding scholarships, 18.000 families of DesaGemilang programs in 35 villages in 14 provinces in the year, 5000 families receiving assistance for basic needs per year, 998 families of SejutaBerdaya programs, 250 orphans of My Heart for Yatim program and more than 2500 families of victims of natural disasters.

The Al Azharwaqf institution is one of the waqf institutions that have to succeed to collect and distribute cash waqf that has been received with various existing programs. The success of this fund collection cannot be separated from the promotion carried out by the institution. Therefore, this research will explore how the Al AzharWaqf Institution implementing the promotion mix on collecting cash waqf.

2. Literature Review

2.1 Cash Waqf

Cash waqf comes from the word WaqfAnNuqud, which is waqf with a currency that's made from gold, silver or other (Ibrahim, 2009). Article 16 paragraph 1 and 3 of Law No. 41 of 2004 about waqf explains that waqf objects including money and securities with the provisions of the principal value of money must be guaranteed its sustainability, may not be sold, granted and or inherited. Furthermore, the explanation of the 2012 Fatwa of the Indonesian Ulema Council (MUI) on waqf money is; Cash waqf (Al-NuqudWaqf) is a waqf by a person, group of people, institution or legal entity in the form of cash; included in the definition of cash are securities; cash waqf is *jawaz* (allowed); the principal value of cash Waqf must be guaranteed for its sustainability, may not be sold, granted, and or inherited. Subheadings should be as the above heading "2.1 Subheadings". They should start at the left-hand margin on a separate line. The top of this paragraph illustrates a sub-subheading.

2.2 The Mix Promotion for Non-profit Organization

The non-profit organizations have begun to adopt business-like techniques used in the non-profit sector because they are also faced with the typical market pressures of non-profit organizations, such as competition and funding needs to fulfill their mission (Andreasen and Kotler, 2003; Dolnicar and Lazarevski, 2009). Non-profit organizations in collecting funds use a marketing strategy with a promotional mix approach in several ways, including door drops, sending a letter without address to a particular address with a specific location; Press/magazine inserts which include leaflets in magazines or published in certain moments; Direct mail, which is sending letters directly to certain addresses both offline and online; Direct response TV (DRTV) that advertises certain charitable activities directly and makes donations online or calls certain numbers; Face-to-face recruitment donors, volunteers go to crowd centers so that they can withdraw

donations directly / in cash or through a direct debit scheme; Corporate donation, namely the company contributes with a specific purpose; major gifts, which are types of donations from rich men, are sometimes given as legacy forms (Bainess, 2011).

3. Method

This research is a qualitative research. Wahyuni (2012) explained that a qualitative research is an inductive approach that aims to gain a deeper understanding of one's or group's experience. The data used are primary data and secondary data. The semi-structured interview technique is used to obtain primary data. This technique was chosen, because it has flexible characteristics, allowing for new questions other than those in the interview guidelines so that two-way communication between interviewers and speakers arises that can encourage speakers to connect experiences with a perspective that are relevant to research problems (Wahyuni, 2012). Data analysis was carried out by an inductive approach. Where the results of the interviews are described according to the research objectives.

4. Result and Analysis

4.1 The target of Wakif Al AzharWaqf Institution

Particularly, the target of the waqf institutions of Al Azhar are: First, people who will retire. Information related to the desire of retirement people to do waqf is obtained through small studies by conducting focus group discussions (FGD) organized by the Al Azhar waqf institution with related parties (some of the waqif). The results obtained are generally people will do waqf in old age, this includes people who will retire. In Indonesia, the general of the retirement age ranges from 56 years to 65 years. People who will retire already have life in a world that is quite well established and have thought about life after death, so they try to do good deeds for provision in the hereafter. Second, people who will go / back from Hajj or Umrah. The Al Azhar waqf institution has a collaboration with a tour and travel pilgrimage company, namely by using waqf buses to deliver pilgrims from the Al Azhar Mosque Complex to the airport. During the trip, the pilgrims were given an understanding of how death can occur at any time so that they do not return to Indonesia and gather with their families again. So, they were reminded by the organizer again whether they had written about the inheritance letter or had left everything to their relatives. In general, they remember about waqf because their reward is not broken even they are not alive anymore. For pilgrims who return from Hajj or Umrah, they will feel great gratitude, so they will also think about waqf.

The two target groups above are considered in a theta condition, which is a condition where the person is in the most good in faith period so that he always wants to do good deeds. The pilgrims who return to Hajj or Umrah, this theta condition will usually last for 1 to 2 months. The people in this situation are the easiest group when they were explained about waqf. In general, they want to do waqf because they will get a reward that continues even though they have died.

The general target of wakif is rich people (*aghniya*). So, all Muslims are encouraged to do waqf because they are included in the *amaljariyah*, a practice whose reward continues even though people who do charity have died.

4.2 Implementation of Promotion Mix at Al AzharWaqf Institution

The Al Azharwaqf institution was formed with the aim of providing education and serving people who are represented. Education about waqf they do through recitation (*majlista'lim*), information, brochures, catalogs, banners. Education is part of the promotion. Promotions carried out by the non-profit institution must contain educational value because it distinguishes between people/companies that do promotions with the aim of increasing sales and seeking profits.

The main reason someone wants to do waqf is the existence of a program from a waqf institution. This program is important to be used as educational promotion material in a brochure for example. In addition, the existence of a clear program will make it easier for waqf institutions to raise funds and then manage the collected funds. The activity of raising funds made by waqf institutions is not the main task of a non-profit organization. If a waqf institution succeeds in collecting cash waqf according to the target, then their task is not yet finished. This is because this activity only accounts for 30 percent of the total tasks of a waqf institution. The next task is how to distribute the fund and generate the gain for the program.

The Al Azharwaqf institution already has several programs as educational promotion materials. The program consists of various productive waqf programs which are the application of cash waqf. Collected funds from cash waqf are distributed in various forms of productive waqf programs, namely: First, productive waqf property sector. Total benefit from this sector is Rp 116 million per year. Second, productive waqf of the transportation sector. Total benefit from this sector is Rp 1 billion 440 million per year. Third, productive plantation waqf. Total benefit from this sector is Rp750 million per 6-7 year. Fourth, productive waqf farming of joint business groups (KUB) assisted by LAZ Al Azhar. Total benefit from this sector is Rp600 million per year. Fifth, agricultural productive waqf assisted by LAZ Al Azhar. Total benefit from this sector is Rp400 million per year.

The agreement between the waqf institution Al Azhar and Al Azharamil zakat (LAZ) Al Azhar about holding socialization together. Suppose holding an education program (*majlista'lim*) in a package that discusses zakat and waqf. This is could be done because the target database is same between *wakif* and *muzakki* so it is more efficient and can save on educational promotion expenses because Al Azhar and LAZ waqf institutions Al Azhar share operational costs. This division of costs by 75 percent is charged by LAZ Al Azhar, it charges more because this institution has been established earlier and its asset bigger than the Al Azharwaqf institution. The 25 percent portion charged to the Al Azharwaqf institution will be taken later when the productive waqf channeled to LAZ Al Azhar has already been produced. On the other hand, this institution also still receives funding assistance from the Al Azhar Islamic Boarding School Foundation for some of its expenses. This is because the expenditure of waqf institutions can only be budgeted after the result of management of the cash waqf has been collected.

The marketing team of the Al Azharwaqf institution has a coordinative function with LAZ Al Azhar. This waqf institution also uses the Al Azhar LAZ marketing team especially when there are events in the field. In promotional activities that are part of marketing (product) programs, waqf institutions use two types of promotional tools, direct and indirect promotion.

Promotional tools such as Facebook, brochures, banners, email blasts, direct mail and *majlista'lim* which are included in the direct promotion category are promotional tools that can invite wakif targets to represent 10 percent of the amount of material distributed. If someone is browsing and viewing from the official website of the Al Azharwaqf institution or other sources of waqf from the internet, the possibility of that person being a wakif is only 5 percent of the target number of waqf. This number is likely to be 10 percent and 5 percent based on historical data from the Al Azharwaqf institution. As for all the direct promotion tools that are most often used are Facebook and email blast, because they are relatively easy and cheap in terms of financing.

The target for each year is the accumulation of Al Azhar endowments of Rp 20 billion. This target is usually fulfilled in the month of *Ramadhan*, Rp. 8 billion was collected (accounting for 40 percent of the total target). In the month of sacrifice collected Rp 2 billion (taking up 10 percent of the total target). At 10 months (regular) collected Rp. 10 billion (taking 50 percent of the total target), so that every month a fund of Rp. 1 billion. Target Rp. This 1 billion can be collected every month if there are 2000 wakif people with an average transaction value of Rp. 500,000, - (average wakif transacts based on historical data of the Al Azharwaqf institution). Al Azharwaqf marketing team uses a 10 percent probability number of the total promotion target. This means that 2000 waqf people constitute 10 percent of the total promotional target of 20,000 people. This number will increase to 40,000 promotion targets if the probability is reduced to 5 percent so that 2,000 people will be left behind.

The achievement of the waqf fund target of Rp 20 billion mostly came from Wakif who had already represented cash in the Al Azharwaqf institution or from the *muzakki* who committed alms at LAZ Al Azhar so that it had been recorded in the existing database. Donors who are included in the existing database are the main beneficiary targets. The effort to provide promos is not large in terms of costs, because it does not require banners, spread brochures again. The ability needed is the penetration ability of the marketing team. This capability is included in maintaining the awareness of donors to represent themselves. Promotional tools commonly used are telemarketing and email blast. The effort to provide promotions to parties outside the existing database is not large because the promotional costs that arise will be more expensive than maintaining the awareness of donors in the existing database.

Direct promotion is also carried out by the waqf institution Al Azhar. Some programs that have been running include social trips and social learning. Socio trip is one of the productive waqf programs in the transportation sector that uses waqf buses as the main means of transportation, serving donors, especially the internal community of Al Azhar. Whereas social learning begins with wakif, which accounts for 20 percent of the company's shares. The company is engaged in training (training) including leadership training, Neuro-Linguistic Programming (NLP) training, financial planner training,

parenting training. The donors who have training needs will be encouraged by the marketing agency of the waqf Al Azhar to use the training company.

In order to maintain the trust of the waqif, the waqf institution of Al Azhar reports on asset management (cash waqf) and distributes the benefits of its waqif maximally every six months. In addition, this institution plans to hold a *wakif* general meeting. In this meeting, all *wakif* and their families will be invited and provide financial reports and management of waqf for one year. The purpose of this meeting is as a transparency function and maintaining awareness of waqf.

5. Conclusion

The Al Azharwaqf institution has implemented a promotion mix in the process of collecting cash waqf. Promotions that are used include a direct promotion, using Facebook, brochures, banners, email blasts, direct mail and *majlista'lim*, and indirect promotion through socio trip and social learning programs. The annual target of the Al Azharwaqf institution has reached its target, but the Key Performance Indicator from a waqf institution is not from the number of funds collected but how much the funds are channeled. Therefore, the Al Azharwaqf institution in collaboration with LAZ Al Azhar made a productive waqf program.

Accountability can be done by the Al AzharWaqf Institution by making financial reports that are audited by public accountants and published every year and displayed on official websites. In addition, this institution must immediately convene a wakif general meeting to be more transparent and create kinship between management and donors.

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The Role of Social Media on the Performance of Micro, Small and Medium Enterprises (MSMEs) in Palembang City

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Abstract

MSMEs have a strategic position and have an important role in the economy of a country, but nowadays the challenges of the development of information technology, especially related to utilizing social media in marketing. This research aims to analyse the use of social media and its benefits for the performance of MSMEs. This research is a descriptive study and 40 samples of MSMEs owners were selected through purposive and convenience sampling technique. The data were collected with questionnaire and analysed descriptively by using tabulations and graphs. The results of this research indicate that the most widely used social media is Instagram, followed by WhatsApp, Facebook, and Line. Social media is used predominantly to facilitate interaction with customers, provide the product information, reduce costs, implement marketing strategies, and to gain product popularity. The use of social media can increase the interaction with customers, sales volume, a good image of customers, and to increase the number of customers.

Keyword: MSMEs, Social Media, Performance, Business and Economy

1. Introduction

MSMEs are business sectors that have an important role in the national economy of a country. In economic growth, MSMEs are able to contribute to the creation of job opportunities, Gross Domestic Product (GDP), and a number of relative dominant businesses. In some countries, the role of MSMEs in creating job opportunities is very significant. In the European Union (EU), MSMEs are able to create around 90 million job opportunities, in the Netherlands, MSMEs can employ 55.0 percent of the total workforce, in Australia, MSMEs can create 51.0 percent of private employment, in Italy, MSMEs can absorb 2.2 million from labour national work. The role in increasing GDP in some countries is also quite significant. The contribution of MSMEs to GDP in China reached 60.0 percent in China, 57.0 percent in Germany, 55.3 percent in Japan, 50.0 percent in Korea, and 47.3 percent in Malaysia (Katua, 2014).

In 2013, MSMEs in Indonesia contributed to the creation of job opportunities, the number of dominant business units, and contributions to GDP (Kasih, 2018; OECD, 2012). In terms of the number of business units, the number of MSMEs in Indonesia reaches 99.9 percent of the total business units, able to absorb 97.0 percent of the workforce, and can create a GDP of 57.5 percent.

In the era of globalization, the MSMEs market would be required to do a variety of strategies continually to survive. Vast information and many competitions have increased consumer awareness of the many choices of products that can be chosen. Therefore, MSMEs must immediately improve, to still exist and to compete with other companies. One strategy that can be done in improving is utilizing the potential of information technology. The potential of information technology that can be utilized by MSMEs in the field of marketing is referring to the

usage of social media, including increasing productivity and marketing, promotional activities, and selling product performance. (Umar, 2016 ;Akhmad, 2015; Srirejeki, 2016; Purwidianoro, Kristanto, Hadi, 2016). This research aims to determine the characteristics of MSMEs as users of social media, the type of social media used by MSMEs, and the role of social media in affecting the performance of MSMEs in Palembang City.

2. Literature Review

2.1 Characteristics of MSMEs in Indonesia

According to Law No. 20 of 2008 concerning Micro, Small and Medium Enterprises, the characteristics of MSMEs in Indonesia are classified based on the nature of possession, the number of assets, sales proceeds, and the amount of credit that can be obtained from the bank. However, in general, the characteristics possessed by MSMEs can be distinguished in terms of: business fields, management system, financial administration systems, ability to access financial institutions, quality of human resources, and legal aspects or forms of legal entities (Kasih, 2018)

According to Kuncoro (2013), in general, MSMEs characteristics include simple management system, low access to credit institutions, lack of legal status, and concentrated in certain business fields. The criteria used to classify MSMEs in Indonesia are the number of assets and sales (Law No. 20, 2008). Micro businesses have assets of ≤50 million rupiah and sales ≤300 million rupiah. Small businesses have assets >50 million - 500 million rupiah and sales >300 million - 2.5 billion rupiah. Medium businesses have assets >500 million - 10 billion rupiah and sales >2.5 - 50 billion rupiah.

2.2 Social Media

In recent years, the use of social media globally has continued to increase. Social media is internet-based tools for sharing and discussing information among human beings. It is all about networking that espouses trust among parties and communities involved (Eltayib et.al, 2018). Social media allows people to use technology resourcefully and connect with others. It is a new set of tools, a new way for businesses to connect with customers more efficiently (Honkaniemi, 2015). In Indonesia, 4 out of 10 people actively use social media (Kominfo.go.id, 2019). Various social media trends in Indonesia are Facebook, Whatsapp (WA), Instagram, Twitter, Line, Path, and YouTube (Umar, 2016). The influence of IT (internet) is very large in the world of marketing. The usage of internet is very intensive and massive in business marketing activities. Even among entrepreneurs and marketers, online marketing strategies are very popular in line with the growing popularity of internet use. (Lasmadiarta, 2011).

The usage of social media in marketing activities enables companies to achieve a better understanding of customer's needs in order to build effective relationships. Social networking provides small businesses with multiple opportunities to build closer and more profitable relationships with customers (Eltayib et.al, 2018).

2.3 The Role of Social Media on MSMEs

The role of social media in increasing the activities and business performance of MSMEs is very large. From several studies conducted by several researchers, it was shown that the use of social media by MSMEs provided benefits for improving the performance of marketing activities (promotion). (Tajvidi & Karami, 2017; Lakshmi et al., 2017; Purwidianoro et al., 2016; Umar, 2016, Srirejeki, 2016), promotion costs that are quite low (Akhmad, 2015; Umar, 2016), services, communication and transactions with customers and suppliers (Ha et al., 2016;

Srirejeki, 2016; Akhmad, 2015; Umar, 2016; Purwidianoro et al., 2016; Lakshmi et al., 2017; Purwantini & Anisa, 2018), and increasing sales performance (Srirejeki, 2016; Edomwan et al., 2011; Purwidianoro et al., 2016; Lakshmi et al., 2017).

3. Method

3.1 Types of Research

This research is a descriptive study in which, the idea is to obtain a general and comprehensive explanation of the actual conditions through the collection and interpretation of the data obtained (Kriyantono, 2007), analysis of facts, the nature and relationship between the phenomena being investigated (Sugiyono, 2014).

3.2 Sample and Data Collection

The data used in this study were primary and secondary data. Primary data is the information on the use of social media related to business marketing performance and business characteristics. By using purposive and convenience sampling techniques, 40 respondents which involved MSMEs owners in Palembang City were selected. Samples were chosen with these considerations: the family business of STIE MDP students, had used social media in marketing, owners or managers of MSMEs, willing to be the subject of research, and easily found. This data were collected through questionnaires while the secondary data is extracted from the general characteristics of MSMEs in Indonesia, obtained through literature studies.

3.3 Data Analysis

Data were analysed descriptively, which provided an explanation of consistent patterns in the data, so the results could be studied and interpreted briefly and meaningfully (Kuncoro, 2009). In analysing the data, it does not only focus on the interpretation of data and relationships, but also making a comparison with the results of similar studies (Singarimbun & Effendi, 1989). Descriptive analysis in this study was complemented by simple statistical analysis in the form of tables and graphs (Kountur, 2003).

4. Results and Discussion

4.1 The Characteristics of MSMEs

The MSMEs subjects in this study were family businesses which are managed only by family members. The characteristics of MSMEs were differentiated according to gender, age, education, number of employees, number of assets, and number of sales. Most of the owners are women, aged between 20 to 40, highly educated, and have employee with 1 or 2 people. This indicates that, MSMEs are mostly owned by young people and highly educated, so it makes sense that in marketing activities they are familiar with social media. Based on the value of total assets and sales, the majority of MSMEs are categorised into micro-enterprises.

Table 1 Respondent Characteristics

Categories	Amount of Respondent	%
Sex :		
Male	22	55.0
Female	18	45.0
	40	
Age :		
20 – 30	18	45.0

30 – 40	10	25.0
40 – 50	7	17.0
>50	5	13.0
	40	
Education :		
Elementary School	2	5.0
High School	16	40.0
Undergraduate	16	40.0
Graduate	6	15.0
	40	
Number of Employee :		
1 – 2	25	63.0
3 – 4	8	20.0
>4	7	17.0
	40	
Total of Asset :		
< 50 million rupiah	20	50.0
50 – 500 million rupiah	19	47.5
500 million – 10 billion rupiah	1	2.5
Total Sales		
< 300 million rupiah	36	90.0
300 million – 2,5 billion rupiah	3	8.0
2,5 – 10 billion rupiah	1	3.0

4.2 Utilization of Social Media

The type of social media used predominantly by respondents is Instagram, followed by Whatsapp, Facebook, and Line. This result is different from previous research, where the most widely used social media is Facebook (Akhmad, 2015; Umar, 2016; Lakshmi et al, 2017). The use of Instagram which is more dominant in this study is thought to be closely related to the age of relatively young MSMEs owners.

Table 2 Types of Social Media, Reasons of Social Media Utilization, and Role of Social Media on MSMEs Performances

No	Categories	Amount of Respondent	%
1	Instagram	19	47.5
2	Whatsapp	9	22.5
3	Facebook	8	20.0
4	Line	4	10.0
		40	100

4.3 The Role of Social Media on MSMEs

In this study, social media was used predominantly for 4 reasons: facilitating interaction with customers, providing product information, reducing costs, implementing marketing strategies, and gaining product popularity. The results of this study are in line with some of the results of previous studies. Akhmad (2015) revealed that social media was used to promote products, save marketing costs, facilitate communication (interaction) with customers. In Umar's study (2016) there were several MSMEs that used all types of social media with the same objectives as this research. The same results were obtained by Sirejeki (2016), where the majority of

MSMEs used social media focusing on product marketing (promotion) and introducing products and maintaining customer relations.

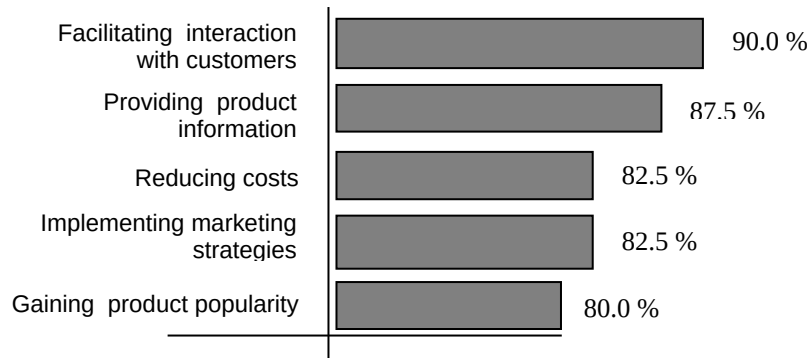


Fig.1 Reasons of Social Media Utilization

The results of this study also show that the use of social media has a role in increasing the interaction with customers, sales volume, good image of customers, and the number of customers. The results of this study are in line with Jones et al. (2015), Srirejeki (2016), Purwidianoro, et al. (2016), Akhmad (2015), Lakshmi et al. (2017), Ha et al. (2016), and Umar (2016) where the most dominant role of social media is increasing interaction and communication between companies and customers, while the role of social media in improving sales performance is revealed in the study of Ha et al (2016), Purwidianoro, et al (2016), and Srirejeki (2016).

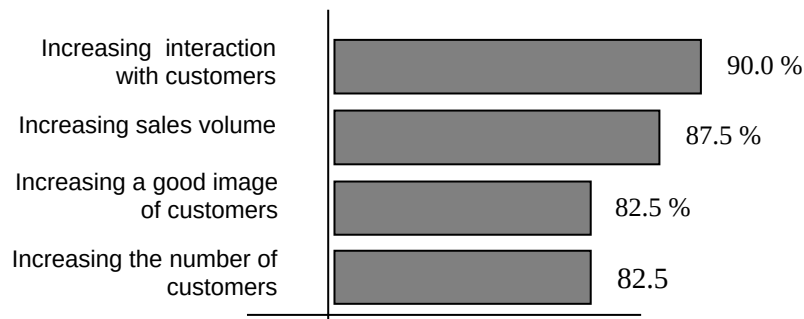


Fig. 2 Role of Social Media on MSMEs

5. Conclusions

In order to exist and survive, MSMEs must be able to use social media effectively to support marketing activities. MSMEs in this study are family businesses, managed by young people who are very familiar to using the social media. The most dominant social media used was Instagram, followed by WhatsApp, Facebook and Line. The use of social media has a role in increasing interaction with customers, sales volume, good image of customers, and number of customers.

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Factors Influencing Purchase Intention Based on Facebook Advertising: DAS

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Abstract

Nowadays, growth of social media has become significant to customers to make purchasing through Facebook commerce. However, little studies about Facebook commerce in the beauty industry compared to other industries in Malaysia. DAS uses Facebook commerce as a strategy to make transaction with customer. The purpose of the study is to determine the factors and relationship of purchase intention towards DAS Facebook commerce. Therefore, the study is conducted to identify factors on purchase intention towards Facebook commerce. A survey was conducted using convenience sampling and 100 respondents answered the questionnaire. This study used quantitative method. Overall, the result shows that all of the variables have positive relationship with the dependent variables, but only three of them are significant for this study. Thus this study is expected to help DAS to improve the Facebook Commerce as their platform to sell the products and services.

Keywords: Facebook, social media, purchase intention, online purchase

1. Introduction

The growth of social media has become crucial to customers in creating purchasing decisions wisely and this has modified the consumers' decision-making behaviour (Elzinga, Mulder & Vetvik, 2009). Social media like Facebook commerce has become main-stream internationally and the numbers of social media businesses have also been increasing rapidly (Edelman, 2010). According to Zhao (2016), he mentioned that the connection between e-commerce and social networking is increasingly used by many businesses as their platform to sell the product. Other than that e-commerce also supports social media such as Facebook, Twitter or Google+ that allow the user to make the transaction to buy the product directly by clicking the buy button in advertisement and other posts. It is important for the company to increase their knowledge from social networking sites for new trends to conduct e-commerce

activities to know the behaviour of the user. Frequently, using social media as the platform would be a strategic investment for the business to advertise or announce their products or services to increase consumer awareness and for the branding of the business.

Rahayu & Day (2015) strongly agree that e-commerce has changed many things in business nowadays including how the product is sold, purchase and deal with the customer but also can be improved the from production excellence to "customer intimacy". As a result, a new economy has been created by e-commerce. The business needs to survive by adapting to this technology to compete with other companies and to avoid them being left behind by the early adopters. Furthermore, Anari (2014) said that online social networks such as Facebook facilitates collaboration, communication and interaction between the users connected to the network from around the globe. With the growing population of Facebook users, many businesses take the opportunity to communicate with users closely and influence them to buy products or services.

Therefore Facebook can enhance the relationship between the business and consumers by making effective advertisement broadcasting using social media and is able to estimate the market trend and flow of the sales. This indicates an overview on how Facebook commerce can affect the business and provide the income for the company. The company can also display their products on their page and enable customers to check out and buy without leaving the site.

2. Statement of problem

Rapid change in technology encourages the business, marketers, and advertisers to use Facebook commerce to reach their customer easily and effectively. This has resulted in impressive consideration among researchers leading the exploration on the specific issue. As per Boyd and Ellison (2007), as a person to person communication webpage, Facebook offers an online stage which enables clients to produce and offer data, share information, make profiles, and cooperate with other individuals. According to Nicole Tan, Facebook Malaysia country manager, Malaysia e-commerce sector state an increasing grown by 47% as from 2015. Even though there is a huge business potential in Facebook commerce, the purchase behaviour in Facebook commerce is still not well-studied with only a few studies that are related to purchase intention through Facebook commerce.

3. Research Objectives

The main objective of this study is to investigate factors that influence purchase intention towards Facebook commerce among customers DAS while the specific objectives are to determine the major factor that influences purchase intention towards DAS Facebook commerce and the relationship between performance expectancy, effort expectancy, social influence, facilitating conditions and trust with purchase among users.

The objectives of the research areas are as mentioned below:

RO1: To study the major factor that influences purchase intention towards DAS Facebook Commerce.

RO2: To investigate the relationship between performance expectancy, effort expectancy, social influence, facilitating condition and trust with purchase intention towards DAS Facebook Commerce.

4. Research Methodology

The study was conducted to identify factors on purchase intention towards Facebook commerce by adding element trust on an original Unified Theory of Acceptance and Use of Technology model. Convenience sampling was used in order to get the most accurate data where the first available primary data source was used without additional requirements for the research.

Primary data are obtained directly from the respondents by the researcher. In this research, questionnaire is being used as a primary data. Type of questionnaires used is closed ended questions which is Likert Rating Scale. The respondents were able to measure their behaviour by checking how strongly they were satisfied or dissatisfied with the Facebook commerce. It is easier to reach the respondents by using questionnaire to get their cooperation to answer it. After the respondents answered the questionnaire, the data that were obtained from the answer will be sorted, coded, entered, tested, presented and analyzed to get the result of this study. The questionnaire had been used as the main instrument in this research. The standardized questionnaire was developed by the researcher and was used to collect data from the customers that come to DAS Spa.

This research uses a questionnaire to investigate the customer purchase intention towards Facebook commerce. In this study, the targeted population of this research is drawn from the customer of DAS which is 3,019 customers since 2017 and estimated 250 customers that came to the spa per month. A total of 100 sets of questionnaires were distributed to the customers of DAS Spa.

5. Data analysis and Discussion

5.1 Profile of Respondents

Table 1: Demographic Profile (n = 100)

	Categories	Frequency	Percentage (%)
Gender	Male	18	18.0
	Female	82	82.0
Race	Malay	80	80.0
	Indian	16	16.0
	Chinese	4	4.0
Age	Below 20	10	10.0

Frequency Online Purchase (monthly)	21 – 30	43	43.0
	31 – 40	38	38.0
	Above 40	9	9.0
	1 – 2	53	53.0
Frequency Online Purchase (monthly)	3 – 4	34	34.0
	5 – 6	8	8.0
	More than 6	5	5.0

Table 4.1.1 shows the respondent's profile by gender, race, age, likeability and purchase frequency. Table 4.1.1 has shown that there are 18 male respondents whom had responded on the research that made up 18% of it, whereas another 88% of the respondents were made up of female respondents. It indicates that, female respondents are higher than male respondents.

As per the respondent's demographic by race, those who answered the questionnaire were mostly Malay (80%), followed by Indian (16%), and lastly Chinese (4%).

The respondent's age group are shown in the table above. The most contribution of respondents came from the age group of 21 to 30 years old with a result of 43 respondents at 43%, followed by age group between 31 to 40 years old (38%), age group between 18 to 20 years old (10%) and lastly above 40 years old (9%).

Lastly, for purchase frequency by 100 respondents, it is shown that more respondents do purchase through Facebook 1 to 2 times per month which is 53%, followed by 3 to 4 times (34%). Next, respondents that bought the desired items about 5 to 6 times (8%) and lastly, who actively used Facebook Commerce above 6 times (5%).

5.2 Reliability Analysis

Table 2 shows the reliability results for all measurements tested in the study. There was substantial variation of Cronbach's Alpha values for all variables ranging from 0.753 to 0.934.

Table 2: Reliability Statistics

Variable	Number of Items	Number of Deleted Items	Cronbach's Alpha
Performance expectancy	4	-	0.916
Effort expectancy	4	-	0.904
Social influence	4	-	0.903
Facilitating condition	4	-	0.792
Trust	4	-	0.753
Purchase intention	4	-	0.934

Nunnally and Bernstein (1994) suggested that when the Cronbach's alpha values are greater than .70, they are generally considered desired or adequate. Thus, this shows that all five (5) variables in this study met the threshold of the analysis. This suggests

that the measurements of **performance expectancy, effort expectancy, social influence, facilitating condition and trust** were acceptable, valid and reliable.

5.3 Correlation Analysis

Based on the test that have been conducted, the highest correlation that all of the variables could have with the purchase intention is between the level of high correlation and the factors which are effort expectancy which shows a $r=0.803$, then followed by social influence factor that yields result of $r=0.777$, and lastly performance expectancy which is represented by $r=0.720$.

Meanwhile, there is a moderate correlation between the facilitating condition and purchase intention with the number $r=0.601$. On the other hand, the result also shows another moderate correlation between trust and purchase intention with $r=0.690$

Table 3: Pearson Correlation Analysis

	Performance expectancy	Effort expectancy	Social influence	Facilitating condition	Trust	Purchase intention
Performance expectancy	1	.954**	.751**	.415**	.483**	.720**
Effort expectancy			.794**	.478**	.545**	.803**
Social influence				.628**	.798**	.777**
Facilitating condition					.704**	.601**
Trust						.690**

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.439	.280		-1.565	.121
	Performance expectancy	-.398	.190	-.365	-2.098	.039
	Effort expectancy	1.023	.207	.922	4.950	.000
	Social influence	.068	.140	.059	.486	.628
	Facilitating condition	.120	.086	.102	1.391	.167
	Trust	.304	.122	.244	2.498	.014

a. Dependent Variable: INT

Purchase intention						1
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** Sig.level at 2 tailed

5.4 Multiple Regression Analysis

To reject or accept the hypothesis, the requirement needed is by looking at the sample statistic. This means if a sample does not support about the null hypothesis, then the alternative hypothesis is accepted. Even so, the acceptance here does not mean that there is an acceptance of null hypothesis but it only means that the sample given

which are independent variables does not have a significant relationship with the dependent variable. In order to identify the relationship between a dependent variable and independent variables, the p-value must be less than 0.05 ($p < 0.05$).

Table 4: Multiple Regression Analysis

Table 5: Hypothesis Results

VARIABLES	NULL HYPOTHESIS	RESULT
Performance expectancy	There is no significant relationship between performance expectancy and purchase intention.	$p=0.039$ which is less than 0.05 HoREJECTED
Effort expectancy	There is no significant relationship between Effort expectancy and purchase intention.	$p=0.000$ which is less than 0.05 HoREJECTED
Social influence	There is no significant relationship between Social influence and purchase intention.	$p=0.628$ which is more than 0.05 HoACCEPTED
Facilitating condition	There is no significant relationship between Facilitating condition and purchase intention.	$p=0.167$ which is more than 0.05 HoACCEPTED
Trust	There is no significant relationship between Personality Traits – planning and entrepreneurial intention	$p=0.014$ which less than 0.05 HoREJECTED

6. Conclusions and recommendations

The first objective is to study the major factor that influences purchase intention towards DAS Facebook Commerce. Based on the findings, it can be concluded that all of the variables have their own significance level towards the dependent variable such as purchase intention. Through that, among those three significant variables, it can be concluded that effort expectancy is the major contributing factor that influences purchase intention of DAS Facebook Commerce. This is because effort expectancy has the highest unstandardized coefficients (Beta) with purchase intention whereby the Beta = 1.023 in value. This is consistent with the past researches that stated the effort expectancy will have a significant effect to use new technology and system (Muk, 2007, Dickinger&Kleijnen, 2008; Venkantesh, Thong & Xu, 2012).

On the other hand, the second objective is to investigate the relationship between performance expectancy, effort expectancy, social influence, facilitating condition and trust with purchase intention toward DAS Facebook Commerce. The findings indicate that only three variables which are performance expectancy, effort expectancy and trust are significant to the purchase intention while social influence and facilitating condition proved otherwise. Therefore, social influence and facilitating condition should be eliminated as the factors that influenced purchase intention towards DAS Facebook Commerce. This is supported by Jones and Leonard (2008) who said that to build trust among company, firm and consumer, the company must be improved by the content that shared on Facebook.

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Drivers, Enablers and Challenges of Effective Project Managers

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Abstract

The purpose of this research is to examine the drivers, enablers, and challenges of an effective project manager. This is a quantitative research study target to all project managers, project leads, managers and as well as project contributors who work in any company in Malaysia. A total of 250 questionnaires have been distributed via email and hard copies to the major industry state in Malaysia like Penang, Kuala Lumpur and Johor. Resulted in 133 questionnaires or 53.2% of completed questionnaires were returned and used for statistical analysis. The analysis indicates that in knowledge and skill dimension like a soft skill, technical skill, and green skill play an important role to drive and enables the effectiveness of a project manager. Besides, tools and techniques used and applied during project planning, monitoring and controlling also show a significant component in determining the effectiveness of a project manager. Surprisingly, in the innovativeness dimension project manager with innovator characteristic show did not have significant influence for an effective project manager however project manager with adaptor characteristic was shown significantly to be an effective project manager which contradicts with the previous literature study. As a conclusion, in order to remain competitive, these drivers, enablers, and challenges are essential for any organizations' project managers when managing and handling projects.

Keywords: Project Manager, Knowledge & Skills, Tools and Techniques, Innovativeness

1. Introduction

A project manager plays an important role in project management. The project manager is responsible to achieve this objective through the application of knowledge, skills, tools, and techniques in the project activities - also known as project management (PMI,

2008). Project management appears to affect the success of an organization and as a result, most corporate companies start to pursue project management as an important activity to manage their operations and expansion.

In the past research, most of the researches were focused on the correlation between project success factors and ability to handle multiple complex projects toward the core competencies of the project managers (Alam, Gale, Brown, & Khan, 2010; Azim et al., 2010; Caird, 1994; Jacques, Garger, & Thomas, 2008). Not many researchers study the relationship between the core competencies (such as knowledge, skills, and innovativeness) and drivers, enablers, and challenges of effective project managers. In addition, most previous studies related to project managers are conducted in other parts of the world (Alam, et al., 2010; Azim, et al., 2010; Caird, 1994; Green & McCann, 2011; M. Kirton, 1984) and not many do on project managers who work in Malaysia.

In Azim (2010) research, he demonstrated that the usefulness of soft skill to help the project manager not only handle the simple project but as well as a complex project. Besides, Azim (2010) further justified soft skills not only help to increase the effectiveness for a project manager who usually handles the single project but also in the situation where a project manager concurrently handles multiple projects. Besides there are also study show that those project managers who are good in building up the knowledge and skills would most likely help them to position themselves for future career success (El-Sabaa, 2001).

Furthermore, ethical is an important green skill for a project manager. According to Parry and Proctor-Thomson (2002), they conclude that ethical integrity is an important factor for effective leadership. Mishra, Dangayach, and Mittal (2011), based on their study, ethics will result in sustainability of the project. Thus, it will increase the values and morality among the team.

In today's business, project managers are provided with various tools and techniques that would increase the effectiveness during the project life cycle. Ika, Diallo, & Thuillier (2009) and Dvira, Razb & Shenhar (2003) propose that tools and techniques that would help to increase the effectiveness of a project manager such as planning, monitoring and controlling tools. Besides, it further justified by the study done by Ebert (1999). Additionally, Potts(2010) argues that the usage of appropriate project management tools and techniques generally reduce the risks of not meeting the deadlines, etc.

Mustapha (1998) had been identified as the personal variable and as well as the job variable is the key factor influencing for the effectiveness of a project manager. Kirton (2003) noted that "The Adaption-Innovation Theory is founded on the assumption that all people solve problems are creative". Tuilett (1996) proposes that the innovativeness of project managers make important contributions to improve their efficiency while managing multiple projects. Kapsali (2011), shows that a project manager who manages the project by using traditional or conventional project management practices it might lead to the failure of the innovation project. Therefore, the result of the study shows that the innovativeness of a project manager in his thinking, an adopter, will eventually bring innovation project more successful. According to (Drucker, 2006), "effectiveness is an important discipline which can be learned and must be earned". From the study by Wang

(2011), he identified that an effective manager is supposed to be supportive, caring, fair, engaging, self-disciplined, unselfish, responsible, and knowledgeable.

2. Statement of the problem

Thus, the limited study contributed to project management and the effectiveness of a project manager. Hence, the motivation for this study is to fill the existing gap in research by examining drivers, enablers, and challenges of effective project managers working in Malaysia in terms of knowledge, skills, usage of tools and techniques, and innovativeness. It is believed that soft skills and technical skills play in a vital role for a project manager.

Are soft skills and technical skills play in a vital role for a project manager? I believe this a hot topic which had been discussed from the past. If it was so important, will both soft skills and technical skills help to increase the effectiveness of a project manager? From the study by Alam, Gale, Brown, & Khan (2010), the proof that soft skills not only help project managers to be more effective but are also necessary to train the future project managers. On the other hand, the study from Wateridge (1997) indicates that both soft skills and technical skills are equally important.

Green & McCann (2011) argue for the need to develop “green skills” on project managers to enhance their ability to lead the team in a green economy. Similarly, Chen (2011) supports this. Is it true that environmental leadership are positively associated with green organizational identity and green competitive advantage?

There are a number of studies agreed with tools and techniques that would increase the effectiveness of project managers but there are some contradict the point of view based on the research done by Rose, Pedersen, Hosbond & Kræmmergaard (2007). Another question raised that, can tools and techniques might help to increase the effectiveness and the competency of the project manager roles?

Therefore does it mean if a project manager has those characteristic eventually they will be more effective? It might not necessary as throughout his study, he also additional point out that traditional culture also plays in an important role in influencing the perception of the effectiveness of managerial behaviors.

There are a number of studies done with regards to the characteristics of an innovator such as thinking style, creativity, problem-solving, and decision-making. It will be important to identify the personal variable for project manager in detail and measure the characteristic to find a set of the significant personal variable. At the same time, the innovativeness of project managers’ needs to be identified. How is effectiveness measured? Base on the research done by Analoui, Ahmed, & Kakabadse (2010), they are proposing eight parameters of managerial effectiveness which they used to measure the effectiveness of a project manager.

3. Research Objectives

The effectiveness of project managers is the main focus of this study, which seeks to examine the critical factors that affect effectiveness. The specific objectives are to determine the relationship between knowledge and skills, tools and techniques and innovativeness of an effective project manager.

4. Research Methodology

This study is descriptive research employing the survey method through the distribution of questionnaires. Apart from descriptive statistics, Pearson Correlation was also employed to establish the relationship between the variables. Cronbach's Alpha was also tested to check reliability and validity. Other than that, the correlation analysis and multiple regression analysis were also conducted to test the relationship between knowledge and skills, tools and techniques and innovativeness of an effective project manager.

This study covered the manufacturing sectors as manufacturing sectors was second largest of Malaysia income which contributes about 25% to Malaysia's Gross Domestic Product (GDP) after services sector (Gross Domestic Product (GDP) by State, 2009). Based on the manufacturing industries' statistic from Department of Statistics Malaysia (Report on the Annual Survey of Manufacturing Industries, 2009), there are approximately 145,796 or 8.4% employees in the target population whereby they categories as managers, professionals, and executives in their statistics.

Based on the target population of 145,796 (Report on the Annual Survey of Manufacturing Industries, 2009), this study aims to collect a sample size of about 100 respondents using purposive sampling as the targeted sample need to be exposed to project management. The confidence level and confidence interval is set to 95% and 10%.

The questionnaires consist of six different sections. Section A is to focus on gathering information on the personal demographics such as education levels, current job role, type of projects involved, year of experiences and number of projects involved. While sections B, C, and D were mainly measured by the independent variables. After that followed by, Section E which measured the dependent variable.

Respondents are asked to indicate their perceptions of the effectiveness of project managers. The questionnaire is constructed with the five-point Likert scale ranging from 1 = Strongly Disagree to 5 = Strongly Agree. The questionnaires are enclosed with a cover letter to explain the purpose of the study.

When the questionnaires are ready to be tested, a pilot test was conducted on ten pre-selected, experienced project managers. Based on their inputs and feedbacks, the questionnaires are revised accordingly.

After the pilot test, all respondents have a short discussion to identify any difficulty faced during the survey. As a result, all of them are satisfied and have no doubt with the

questionnaires. Therefore, the questionnaires are started to distribute as its original design to all of the respondents. A total of 138 respondents which comprised of project managers, participated in this survey.

5. Data analysis and Discussion

5.1 Response rate

Out of the total 250 questionnaires distributed, only 138 questionnaires were returned. However, 5 questionnaires were excluded because of incomplete of the questionnaires. Hence only 133 questionnaires were used for data analysis. Hence, the response rate was 53.20%.

5.2 Profile of Respondents

Majority of the respondents are male (62.4%) while the female only consists of 37.6%. Besides, majority of the respondents are in the age's group of 31 - 35 (38.3%) then followed by 26 – 30 ages group (36.8%). The rest is between 36-40 (21.9%) and more than 40 years old (1.5%). Since age is under, therefore, there are 2 respondents (1.5%) were did not fill up their age information.

From the collected information, there are 82% of the respondents are on Bachelor Degree after that follow by Master Degree which is 17.3%. As expected, the majority of the respondents are currently worked as a project manager, therefore, there are 59.4% are project managers. Besides, the working experiences on most of the respondents are in between 6-10 years (52.6%) then followed by more than 10 years (21.1%). Subsequently, most of the respondents have involved more than 10 projects (39.8%) then follow by 6-10 projects (37.6%) throughout their working experiences. With regards, Software (48.1%) and IT infrastructure (39.8%) are found to be the most frequent project the respondents deal with.

Their self-rating on their project management skills, the majority of them rate their self as reasonably experienced (48.1%) then follow by highly experienced (39.1%). The self-confident level was rated - reasonably confident (48.1%) and highly confident (39.8%).

5.3 Reliability Analysis

Cronbach's alpha is used to test the internal consistency of the variables. Therefore, the level of reliability of the variables is validated base on the value of Cronbach's alpha. Cronbach's alpha for all the variables is greater than 0.7, therefore, it indicates that the level of reliability for the variables is sufficient. Variable with the highest Cronbach's alpha is Tool & Technique: Planning (0.96) and the lowest is Knowledge & Skill: Technical Skill (0.90).

5.4 Correlation Analysis

The correlation coefficient among the variables in Effectiveness (Dependent variables), and all independent variables (Knowledge and Skill, Tools and Techniques and Innovativeness) is ranging from 0.24 to 0.61 ($p < 0.01$). Soft Skill in Knowledge and Skill dimension and Planning in Tools and Techniques are highly correlated with the Project Manager's Effectiveness ($r=0.61$; $p < 0.01$). However, Adaptor in Innovativeness dimension is the least correlated project manager's effectiveness ($r=0.24$; $p < 0.01$) among other independent variables. There is no multicollinearity problem among all the variables. A rule of thumb for the existence of multicollinearity problem is a correlation coefficient greater than 0.80 (Ryu & Roh, 2007).

Table 3 Correlations Among Variables

	Effectiveness	Soft Skill	Technical Skill	Green Skill	Planning	Monitoring & Controlling	Innovator	Adaptor
Effectiveness	1							
Soft Skill	.610**	1						
Technical Skill	.397**	.234**	1					
Green Skill	.526**	.516**	.200*	1				
Planning	.610**	.607**	.436**	.425**	1			
Monitoring & Controlling	.553**	.430**	.372**	.559**	.462**	1		
Innovator	.318**	.414**	.326**	.265**	.434**	.333**	1	
Adaptor	.244**	.347**	.276**	.409**	.369**	.436**	.165	1
MEAN	3.82	3.60	4.30	3.17	3.77	3.46	3.86	3.17
Std. Deviation	.88	.77	.75	1.05	.95	1.03	.85	.91
Cronbach's Alpha	.967	.853	.982	.972	.958	.956	.957	.978

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

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

5.4 Multiple Regression Analysis

Multiple regressions are used to test the hypotheses in the present study. Table 4 illustrates the regression results for factor influencing the effectiveness of a project manager. The model tested H_1 to H_3 by regression independent variables on the effectiveness of project manager as the dependent variable.

Table 4 Multiple Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
(Constant)	.454	.368		1.234	.220	-.275	1.184					
Soft Skill	.354	.093	.308	3.801	.000	.170	.539	.610	.322	.222	.522	1.917
Technical Skill	.184	.081	.156	2.283	.024	.025	.344	.397	.200	.134	.736	1.360
Green Skill	.151	.065	.179	2.321	.022	.022	.280	.526	.203	.136	.575	1.740
Planning	.244	.077	.263	3.186	.002	.093	.396	.610	.274	.186	.502	1.994
Monitoring And controlling	.205	.067	.239	3.066	.003	.073	.337	.553	.264	.179	.562	1.778
Innovator	-.077	.071	-.074	-1.090	.278	-.216	.063	.318	-.097	-.064	.738	1.355
Adaptor	-.164	.066	-.169	-2.472	.015	-.295	-.033	.244	-.216	-.145	.734	1.363

a. Dependent Variable:
Effectiveness

Table 5 Summary of Hypotheses Results

	Description of Hypothesis	Remarks
H ₁ :	Knowledge and skills will positively affect the effectiveness of a project manager	Accepted
H _{1a} :	Soft skills will positively affect the effectiveness of a project manager.	Accepted
H _{1b} :	Technical skills will positively affect the effectiveness of a project manager.	Accepted
H _{1c} :	Green skills will positively affect the effectiveness of a project manager.	Accepted
H ₂ :	Tools and techniques will positively affect the effectiveness of a project manager	Accepted
H _{2a} :	Tools and techniques used in project planning will positively affect the effectiveness of a project manager	Accepted
H _{2b} :	Tools and techniques used in project monitoring and controlling will positively affect the effectiveness of a project manager.	Accepted
H ₃ :	Innovativeness of a project manager will positively affect the effectiveness of a project manager.	Rejected
H _{3a} :	Project manager with innovator characteristics will positively affect the effectiveness of a project manager.	Rejected
H _{3b} :	Project manager with adaptor characteristics will not positively affect the effectiveness of a project manager.	Rejected

6. Conclusions and recommendations

The key findings from this study demonstrate that the key driver for the effectiveness of project managers is the adaptor characteristic; of which, the project managers are concerned with accurately solving problems (in a detailed, structured, tried and understood ways or set rules) rather than finding them. This finding also suggests that innovator characteristic is not necessary for project managers who are 'inherently' innovative based on their unique profiles (young age, highly experienced project managers on software projects, and highly confident).

The findings also reveal that in addition to technical skill, the key enablers for the effectiveness of project managers are the soft skill (including leadership skill and communication skill), green skill, tools, and techniques (for project planning, controlling and monitoring).

Hence, these driver and enablers are necessary to ensure the effectiveness of project managers. Thereby, projects have increased the probability of successful completion on time (efficiently) and on target (effectively) in terms of specifications and budget. So, for businesses that are undertaking projects should consider appointing project managers with strong adaptor characteristics, strong soft skill, embody green skill, strong technical skill and capability to use the relevant tools and techniques. Further, the findings also

suggest that in order to nurture an effective project manager, businesses should consider continuous training and educating young employees with the potential to inculcate the driver and enablers of effective project managers.

At the conclusion, this study reveals that the key driver for effective project manager is the adaptor characteristic; and in addition to the necessary technical skill via knowledge, tools and techniques (for project planning, controlling and monitoring), the key enablers for effective project managers are strong soft skill (including leadership skill and communication skill), and embody green skill for project sustainability in the economics, environment, and social contexts.

In order to acquire true input on the drivers, enablers, and challenges of effective project managers, future research should focus on project managers only; extend the population to include other countries; extend the population to include other industries; probably include elements of management style, business culture, and so on.

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Organic Rice New Product Screening: Customers Preference Application

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Abstract

Value adding to new products can be a challenge for organic rice growers, rice mill owners, and food supplement producers. Therefore, the Consumers Preference theory to allow consumers to express through the new product screening and consumers' sensory testing should be examined before the products are sold at the markets. The aim of this study is to analyse new product screening and to test consumers' sensory in order to develop a new product model leading to health supplement. The mixed methods research by survey was used in data collection and data analysis. Broken-milled organic rice (Hom Mali Rice around Roi-Kaen-Sarn-Sin area in the Northeastern region, Thailand) and its by-products were used for screening and testing. The taste, smell, colour, and the texture preference from the prototype products in the form of cereal powder mixed drink were evaluated. 269 consumers were surveyed for consumers' preference and 15 rice mill owners were in-depth interviewed through a focus group. Consequently, the most preferred product was the Broken-Milled organic rice cereal powder mixed drinks. A questionnaire was used to survey the consumers' preference factors and possible purchasing intention. The results demonstrate that respondents preferred formula A (3.52), with the flavour added, the colour (3.85), the strong taste (3.58), and the smell (3.56) respectively. The factors leading to purchasing intention is the mellowness of the taste and the aroma, statistically at a significant level of 0.05.

Keywords: Sensory Test, New Product Screening, Customers Preference Application, Affective Stage, New Product Development

1. Introduction

Thailand is a major rice producing country. In 2017, the total volume of Thai rice exports was 7,395,579 metric tons (US\$ 3, 324.03 million) (Thai Rice Exporters Association, 2017, Kraithong S. et al, 2018, pp. 259-266). Thai rice can be classified into 2 types: non-pigmented (or white rice) and pigmented rice (or coloured rice). White rice is obtained by removing the husk and outer layer from the entire grain while coloured rice is achieved by eliminating the husk and only a small amount of the outer layer that contains some pigment. Different pigments that include anthocyanin, proanthocyanidins,

and carotenoids produce differences in rice grain colour that range in black, blue, red, and brown (Pereira-Caro et al., 2013, pp. 7976–7986., Kraithong S. et al, 2018, pp. 7976–7986). Even though white rice has long been a staple food in Asia, few people know that pigmented rice actually contains higher health benefits (Sampaonthong, 2016, pp. 74-85., Kraithong S. et al 2018, pp. 7976–7986.). Recently, pigmented rice has become a popular alternative for health conscious consumers. (Kraithong S. et al 2018, pp. 7976–7986) Customers often present certain preferences relative to the same product, such as function, shape, colour, and cost. The ideas in the mind of the customer can be represented by higher level concepts. However, the actual shape, colour, and cost embodied in the product can only be viewed as lower-level features (Cao D. et al, 2011, pp. 162–176). Customer preferences have always been of interest to researchers aiming to support the strategic planning and decision making of business managers (Quan Vu H. et al, 2014, pp. 247–272).

However, the number of product variants needed to satisfy individual customer needs is still an open question, as feature models do not incorporate any direct customer preference information (Zhou F. et al, 2017, pp. 306–317). Opportunity identification is the initial stage in the new product development process where ideas for new products are generated and screened (Rochford L., 1991, pp. 287–296). Therefore the quest for success in new product development requires management to navigate complex processes (Tzokas N. et al, 2004, pp. 619–626). New product development requires a long and detailed process with numerous activities such as product line planning, strategy development, concept generation and screening, business analysis, development, testing and validation, manufacturing development and commercialization. Furthermore, each of these activities has its own unique requirements, some requiring information collection from the market, whereas others requiring the collaboration of different people who are involved in the new product development activities (Muammer Ozer, 2003, pp. 517–530). The rate of market and technological changes have accelerated in the last years. This turbulent environment requires new methods and techniques to bring successful new products to the marketplace. Much attention has focused on new development techniques, but little empirical research has been conducted to validate these techniques (González F.J.M and Palacios T.M.B., 2002, pp.261–271). This study consists of three questions as follow: 1. Prototype product development, for the sensory testing of consumers on the product, what is the development model? 2. What factors do consumers have in screening new products? and 3. What could be the correlation between consumers' preference factors and their purchasing intention?

2. Literature Review

Products and applications are getting more and more complex. From this point of view product development is basically decision making. Product development has changed over time from a sequential to a concurrent or simultaneous process. (Frank S. and Matthias M., 2018, pp. 106 – 124) In this context the development of products has become a key process to increase the competitiveness of the company. (Camila Alejandra L. V. et al, 2018, pp 249-262) In which product development is an indispensable process product testing. Product testing depends on the type of product.

This research focuses on a food supplement product. Therefore, product testing is performed by tasting. Descriptive analysis with sensory panel has thus been the most well defined methodology to characterize various products. (In-AhKim et al., 2018, pp. 250-260) Sensory benefits have a high impact on consumer product choice. During the last few years, experts have observed sensory impressions as the new “consumer exciter.” The scientific discipline of sensory analysis describes the relationship between products (ingredients) and their perception and evaluation by the human senses. Sensory-testing methods represent important tools which enable issues associated with the development, quality assurance, marketing, and sales departments to be addressed (P. Huber., 2017, pp. 617-633). In this research, various theories are studied:

- New Product Development.
- New Product Screening.
- Sensory Test.
- Customers Preference Application.
- Affective Stage.

2.1 New Product Development

New Product Development is now well established. Most of these researches argue that early and close collaboration with key suppliers are important factors in achieving reduced development cost, reduced time to market, and improved product quality (Ole S. Mikkelsen and Thomas E. Johnsen, 2018). Besides new product development is a crucial process in maintaining a company’s competitive position and succeeding in dynamic markets. One of contemporary trends in the global economy is mass customisation that bases on modifications of existing products instead of designing everything anew. The advancement of information technology helps today’s enterprises in managing business processes and collecting data in enterprise systems that can be a potential source of information. Specifications of previous products deliver information of design, cost and time of past new product development projects that can be the basis for developing new products. (Relich M. and Pawlewski P., 2018, pp. 40–45) As a result new product success requires excellence in three categories: (i) reducing product development cycle time, (ii) increasing product development innovation and (iii) reusing company knowledge assets (Pinna C. et al, 2018, pp.184–195)

2.2 New Product Screening

The aim in the idea of screening is to retain the successful ideas and eliminate the ideas which could be failures - much easier to write than to carry out in practice. If in doubt, keep the idea until more information is obtained. Idea screening can be based on tacit knowledge of the individual and of the company, with little new explicit information sought in or outside the company. But the aim in successive screenings is to build up the necessary information for the decisions to be made in a quantitative, objective way. Screening is both a reiterative and a progressive process, so there is a need to relate to the first screening even in the last screening in case the product description has changed and it no longer fits the screening criteria first set out.

The components in idea screening are product idea descriptions or concepts, screening factors and screening techniques. There is a need to have product idea descriptions that everyone involved in screening understands and is evaluating in the same way. The choice of screening factors is of course fundamental - obviously the direction of choice is strongly influenced by the criteria. Lastly the people who do the screening, and the techniques they use, affect the screening results. (Mary D. Earle and Richard L. Earle, 2001)

2.3 Sensory Test

The aim of the sensory testing is to describe the product. Distinguishing two or more products: are there any differences between the quality, its magnitude and direction. Performing: the expert or the consumer. So the enjoyment is the sum of the organoleptic characteristics (Szabó P. Balázs, 2014). Sensory evaluation is a scientific discipline that analyses and measures human responses to the composition of food and drink, e.g. appearance, touch, odour, texture, temperature and taste. The precise way in which sensory evaluation is conducted, along with the different tests and sensory language used needs to be taught. (Food a Fact of life, 2018)

2.1 Customers Preference Application

Customers' preference is a marketing term that means the likelihood to choose one thing over another. In economic, consumers' preferences are defined as individual tastes and being measured by the utility of various bundles of goods (Sowunmi, Omigie, & Daniel, 2014, pp. 78-86.;Thiyagaraj, 2015; Kontot K., Hamali J. and Abdullah F., 2016). Psychologically, preference is viewed as an individual's attitude towards a set of objects that stimulates, his or her behaviour in the decision-making process (Lichtenstein & Slovic, 2006; Kontot K., Hamali J. and Abdullah F., 2016, pp.167–175). The customer is making a choice decision in many ways, from the simple decision to a complex decision. It is a process by which customers are collecting relevant information regarding products' attributes; evaluate the information according to their preferences before assigning a value to choose between alternatives (Hawkins & Mothersbaugh, 2010; Kontot K., Hamali J. and Abdullah F., 2016, pp.167–175).

2.1 Affective Stage

The affective stage is that which attempts to create a preference for one product, brand, or service in the target buyer's or customer's mind, in relation to all others. In other words, communications at the affective stage are designed to develop, maintain, and reinforce positive attitudes in the mind of the target buyer, customer, or consumer. Investment of resources of time and money in attaining such an objective can be huge (Yorke D., 2015).

3. Methodology

The objectives of this study are to analyse new products through screening and consumers' sensory testing. The mixed methods research by survey research was used in data collection and data analysis to verify accuracy and help to provide more complete research results. Organic Hommali Rice from Roi-Kaen-Sarn-Sin area, the Northeastern region, Thailand was used to develop a new product model for health supplement. The prototype of the product model was collected from the sensory testing of the taste, smell, colour and the texture preference. The data from consumers' intention to purchase were also surveyed. 15 rice mill owners were in-depth interviewed through focus group. 269 consumers were surveyed for the product's preference.

3.1 Step 1: The new product screening

The new product screening to explore the new product that is the most attractive new product development concept from the health supplements product model from broken-milled and by-product of organic Hommali rice to produce for the market. Exploratory Qualitative Research is used to collect data on the design and development of product concepts by Documentary Research from Secondary Archival Data, include 15 rice mill owners were in-depth interviewed through focus group of Relevant Subjects about Development Trends of the health supplements product model from broken-milled and by-product of organic Hommali Rice with producers of processed rice products in Roi-Kaen-Sarn-Sin area, in the Northeastern region, Thailand. Content analysis was used to analysedata.

3.2 Step 2: The consumers' sensory testing

After the new prototype product has come, to evaluate the effectiveness of the actual use and study relation of consumer preferences factors with the purchase intention, quantitative research using the field questionnaire survey, was conducted to consumers' sensory testing about consumer preferences about the taste, smell, colour, and texture preference, was conducted to test with the non-probability sampling was proceeded using purposive, quota and convenience sampling methods included selecting the market locations (Organic and Natural Expo : ONE, during 23 - 26 July 2558 between 10.00 - 20.00 at the Queen Sirikit National Convention Center. Ratchadaphisek Road, Klongtoey, and Bangkok, Thailand) with 269 respondents and selection criteria included Thai consumers and experience on Organic Rice products. The 3 parts of questionnaire: part 1 is the general information of respondents such as gender, age, occupation, income and education, part 2 is consumer preferences factors of broken-milled organic rice cereal powder mixed drink, and part 3 is the purchase intention of the broken-milled

organic rice cereal mixed drink. The data analysis used percentage, mean, standard deviation and multiple regression analysis for test the correlation between consumers' preference factors and their purchasing intention.

Table 1: Quantitative Data Collection - Respondent's Profile

Respondent's Profile	Frequency (person)	Percentage
Gender		
Female	194	72.1
Male	75	27.9
Total:	269	100.0
Age		
20-30 years old	66	24.5
31-40 years old	49	18.2
41-50 years old	54	20.1
51-60 years old	57	21.2
Above 60 years old	43	16.0
Total:	269	100.0
Marital Status		
Single	152	56.5
Married	102	37.9
Divorce/Widow	15	5.6
Total:	269	100.0
Education Level		
Primary school/Secondary school/High school or equivalent	50	18.6
Bachelor degree	163	60.6
Higher than Bachelor degree	56	20.8
Total:	269	100.0
Occupation		
Private company officer	59	21.9
Entrepreneur/Business owner	61	22.7
Government officer	23	8.6
Freelance/Part-time job	29	10.8
Student	38	14.1
Stay home parent	30	11.2
Employee / State Employee	10	3.7
Laborer / Farmer	10	3.7
Other	9	3.3
Total:	269	100.0
Income (Baht per month)		
Less than 20,000	85	31.6

20,001-40,000	84	31.2
40,001 - 60,000	35	13.0
60,001 - 80,000	20	7.4
80,001 – 100,000	24	8.9
More than 100,000	21	7.8
Total:	269	100.0
Number of family members (persons)	55	20.4
1 – 2	140	52.0
3 – 4	57	21.2
5 - 6	17	6.3
More than 6	269	100.0
Total:		

4. Findings

The new product models was screened by the food product development experts, provided information on trends in the development of Hommali rice health food products found that the production of health food products is highly feasible because consumers prefer simple, easy-to-eat foods and have more benefits than conventional foods. Hommali rice is rice with high nutritional benefits. However, the processing of products to other products is less, if the study and production of health food products from Hommali rice, it is possible to carry out. Due to the production of organic Hommali rice flour or organic Hommali rice by-products, the organic Hommali rice production of organic rice growers should be studied closely to increase the reliability of the product development process. In other raw materials, the producer should be searching pre-produced data because some organic ingredients may be marketed as specific products, therefore it is important to thoroughly study the information.

Moreover, the industry-leading manufacturers of health food products provided information on the development of Hommali rice health supplements, that all products have the potential to sell, but they need to look at the costs and prices to analyse the feasibility before bring products to market. However, production may be a problem with inadequate production capacity due to time constraints because the production of one product takes at least 1-2 months. Therefore, the manufacturer must choose some new product concepts to develop in order to maximize the time and resources available and manufacturers must first find the needs of the consumer before introducing new product ideas to meet the needs of consumers. Consequently, the product trends and possibilities for producing health food 6 products were selected;

1. Specialized benefits Organic Rice Milk Powder (Ready-to-drink)
2. Fermented Rice Pellet
3. The Broken-Milled organic rice cereal powder mixed drink
4. Probiotic Active Drink from Brown Rice
5. Rice Bran Protein Extract (Dietary Supplements That Help Lower Blood Sugar And Blood Fat)
6. Organic Rice Pudding

From the six products profiles, the broken-milled organic rice cereal powder mixed drink has the most potential for product development because the products contain Hommali rice which the main nutritional value is carbohydrates that are an important source of energy to the body and are also rich in protein, fat, fibre, vitamins and minerals. It is suitable for those who are on a hectic schedule and those who want to eat supplements. Raw materials are a mixture of varieties of rice, especially the broken rice from organic Hommali rice and also contain a variety of cereals, such as millet, black sesame. The benefits of the product include substances that help cure chronic diseases such as diabetes, coronary heart disease, cerebral ischemia, and asthma. The characteristics of the product are brown coarse powder and can be dissolved in hot water, which is easy to be taken. Accordingly, in this study, we chose the broken-milled organic rice cereal powder mixed drink to study the consumers' sensory testing as the next step.



Figure 1: Sample of the broken-milled organic Hommali rice cereal powder mixed drink product

In order for the consumers' sensory testing, the broken-milled organic rice cereal powder mixed drink was generated in 4 formulations (A, B, C, and D), each with a different flavour. The consumers' sensory testing was conducted for the selection of the best prototype formulas and for the improvement of prototype products to meet the requirements and in line with the consumers' preferences.

Table 2: Result of Consumers' sensory testing of the product

Preference Factors	Consumers' preferences mean level			
	Formula A	Formula B	Formula C	Formula D
Color	3.85	3.56	3.65	3.37
Sweetness	3.31	3.19	3.24	2.97
Oily	3.45	3.19	3.26	3.01
Strong	3.58	3.19	3.25	2.97
Mellow taste / deliciousness	3.51	3.32	3.33	3.07
Smell	3.56	3.42	3.34	3.18
Texture	3.42	3.24	3.22	3.03
Overall liking	3.52	3.38	3.35	3.10
Purchase Intention	3.65	3.33	3.38	3.03

Note: Mean interpretation; 1.00 - 1.79: strongly dislike/not buy, 1.80 - 2.59: dislike/may not buy, 2.60 - 3.39: medium like/uncertain to buy, 3.40 - 4.19: like/maybe buy, and 4.20 - 5.00: strongly like/buy

The result of consumers' sensory testing of the broken-milled organic rice cereal powder mixed drink product (Table 2) found that in overall preference factors, respondents preferred formula A (3.52), with the favourite attributes were colour (3.85), strong (3.58), and smell (3.56), including the most formulas' preferences corresponded with the purchase intention. If the product is available in the market, it was found that respondents maybe buy the broken-milled organic rice cereal powder mixed drink formula A (3.65).

Table 3: The relationship between the Consumer preferences factors and the purchase intention of the Broken-Milled organic rice cereal powder mixed drink formula A

Dependent Variable: Purchase intention	
Consumer preferences factors	Beta
Constant	1.274
Colour	.038
Sweetness	.094
Oily	-.008
Strong	-.070
Mellow taste / deliciousness	.260*
Smell	.290*
Texture	.127
R	.657*

*Note: Multiple Regression Analysis, *significant level at 95*

Based on data analysis to ensure that the broken-milled rice cereal powder mixed formula A is consistent with the purchase intention. The result from multiple regression analysis of consumer preferences factors and the purchase intention (Table 3) found that the consumers' preference factors are the mellowness of the taste/delicious (t = 3.080, p = .002) and the aroma (t = 3.195, p = .002) of the prototype product that was positive influences the purchase intention at a significant level of 0.05.

5.0 Conclusion and Discussions

The broken-milled organic rice cereal powder mixed drink was the new product that is the most attractive new product development concept from the health supplements product model from broken-milled and by-product of organic Hommali rice to produce for the market by reason of the product has many nutritional values and maybe developed to meet the consumers' preferences. If the broken-milled organic rice cereal powder mixed drink is available in the market, that formula A was chosen by consumers in the sensory testing step, which corresponds to the consumers' preference factors are the mellowness of the taste/delicious and the aroma of the product that was a positive influence to the purchase intention.

A study on the development of health food products from Jasmine Rice found that consumers tend to consume foods that are more beneficial than general foods and that have less processed products. This is according with ThipawanNgamsak (1994) approach to the development of food products, such as the development of new food products that have never been sold in the market, the improvement of existing food

products to compete with competitors in the quality of the main benefits/nutritional value, the improvement of the production process of the original food products with the production guidelines to commercial, and the development of new food products for nutritional products such as food supplements for the health of its mellow taste/smell and food packaging in the form that appeal to and meet the needs of consumers, and consistent with Saleki, Seyedsaleki, & Rahimi (2012) in terms of the ability to develop effective marketing strategies to motivate consumers. Therefore, entrepreneurs interested in producing this product should pay attention to colour, strong, and smell aspects of it. Especially the aroma that influences the consumers purchases intention. In the other hand, the consumer's acceptance, interest and awareness of the product which is the selling point of the product are important to consumers.

6.0 Limitation for Research

This study only investigated customers' preferences factors of a new product development concept from the health supplements product model from broken-milled and by-product of organic Hommali rice is the broken-milled organic rice cereal powder mixed drinks. Future studies should include an in-depth study of each of the factors studied in order to achieve clear results so that they can be easily and accurately replicated, should studies on other factors, such as consumer perceptions, new product acceptance, and entrepreneurial demand for new product development. It should also be noted that the demand for the product in the consumer is related to the product being studied in order to develop the product in a wider variety of perspectives, and should be studied more in other varieties of organic rice because if some rice production is not available in the market, producer can use other varieties of rice instead.

7.0 Future Research

Future research should consider the continuity of product studies. Market research should be conducted when selling products in the market for a certain period of time to bring improved products to suit the needs of most consumers. Study of development of related products with similar materials to add value, value for the product and organic jasmine rice should be conducted.

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The Effects of University Environments, Personal Traits And Risk Taking Towards Entrepreneurial Intention Among Undergraduate Students

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Abstract

The unemployment rate has increased over the years. Due to that, the government has regards entrepreneurship as a better employment alternative for graduates after finishing their study. Although there are many factors that can affect the undergraduates in determining their entrepreneurial intention. Therefore, this study was carried out to determine the factors affecting entrepreneurial intention among the undergraduate student in the UiTM Segamat. This survey used a quantitative method in order to collect the data using a questionnaire, where 191 respondents were involved in this research. There are four main variables have been adopted from past research which is: entrepreneurial intention, university environment, risk-taking and personality traits (innovation, sociability, planning, and leadership). According to the result, only two variables namely sociability and risk-taking were the significant factors affecting entrepreneurial intention among UiTM Johor students, whereby Risk Taking ($p=0.000$) and sociability ($p=0.008$). The finding of this result would provide a useful insight into the education institution for identifies the factors that can affect and boost the student entrepreneurial intention.

Keywords: entrepreneurship, graduate, student, employability, entrepreneurial intention

1. Introduction

The importance of entrepreneurship education has been stressed by numerous researchers including by Arranz, Ubierna, F. Arroyabe, Perez, & de Arroyabe (2016). Due to the importance of entrepreneurship education in Malaysia, Malaysian Ministry of Higher Education (MOHE) has taken the initiative by making entrepreneurship subjects compulsory to all students (Rahim, et al., 2015).

Entrepreneurship intention refers to the action that one individual toward the consequences action and individual *self-efficacy* (Douglas & Fitzsimmons, 2008). Self-efficacy is an individual's belief in their innate ability to achieve goals. Albert Bandura (1982) defined it as a personal judgment of "how well one can execute courses of action required dealing with prospective situations".

The entrepreneurship intention also involves internal strength, ambition, and passion. In addition, the factor that influencing the entrepreneurship intention is such as demographic profile, support, and personality traits (Zain, Akram, & K. Ghani, 2010).

The universities in Malaysia should play a good role to implement the entrepreneurship intention through their curricular activities and environment. The higher variable that influences entrepreneurship intention is the support from the lectures and curricular activities that are conducted by the university then followed by the support from the inspired people such as successful entrepreneur and the last variable are friends (Samuel, Ernes, & Awuah, 2013).

UiTM has included a subject, Principle Entrepreneurship (ENT530), compulsory to all Faculty of Business & Management students. According to ENT530 course outline, stated that at the end of the semester the students should be able to explain the concept and process related to principles of entrepreneurship using verbal and non-verbal communication. Furthermore, the student can demonstrate managerial skill in preparing a business plan and can demonstrate information retrieval and management skills in creating a business via the social media platform (UiTM, 2017)

In this subject, they learn the basic of entrepreneurship to enhance the passion among the student toward business industrial. Furthermore, they will get exposure to think and react as an entrepreneur. Moreover, they will be taught how to utilize social media for their business. Then they need to create social media to promoting business. There are many things that student a get from this subject. The knowledge that they learn can be practiced for managing their own business in the future.

2. Statement of the problem

Due to the increasing percentage of unemployment, entrepreneurship needs to be fostered among youth and the framework designed to help them build their entrepreneurial thinking. Malaysia headline unemployment is around 10.8% in 2017 is among the highest percentage in Asian country while following with Indonesia 15.6% and China 10.8% (Dass, 2018).

Enhancing entrepreneurship skill among student of the institutions of higher learning (IPT) is one of the main agendas of MOHE to produce graduates and can create opportunities in the future (Bernama, 2018). Furthermore, MOHE targets that by 2020, 15% of students will venture into entrepreneurship while they are still pursuing studies (Bernama, 2018).

From time to times the needs for entrepreneurial graduates keep increasing (Ertuna & Gurel, 2012). In Malaysia, there are more than 34 institutions that offer entrepreneurship education (Hot Course Abroad, 2018). We can assume that entrepreneurship educations are among the most important program offered by higher education. Based on the issued raised, this study is focusing on the effect of university environments and personal traits toward the entrepreneurial intention.

3. Research Objectives

Purpose of the study is to test the relationship between university environment, risk-taking and personal traits (innovation, sociability, planning, and leadership) and entrepreneurial intention.

RO1: To determine the relationship between the university environment and entrepreneurial intention.

RO2: To determine the relationship between risk taking and entrepreneurial intention.

RO3: To determine the relationship between personal traits (innovation, sociability, planning, and leadership) and entrepreneurial intention.

4. Research Methodology

This study is descriptive research employing the survey method through the distribution of questionnaires. By using the simple random sampling, a total of 191 respondents which comprised of UiTM Johor students, participated in this online survey, posted on researchers' Facebook. Apart from descriptive statistics, Pearson Correlation was also employed to establish the relationship between the variables. Cronbach's Alpha was also tested to check reliability and validity. Other than that, the correlation analysis and multiple regression analysis were also conducted to test the relationship between university environment, risk-taking and personal traits (innovation, sociability, planning, and leadership) and entrepreneurial intention. The researcher used the assumption of linearity whereas a linear relationship between dependent and independent variables.

5. Data analysis and Discussion

5.1 Response rate

In this study, 191 of online distributed questionnaires were answered from 6th until 30th March 2019.

5.2 Profile of Respondents

Table 1: Demographic Profile (n = 191)

	Categories	Frequency	Percentage (%)
Gender	Male	23	12.04
	Female	168	87.96
Age	19	1	0.52
	20	3	1.57
	21	10	5.24
	22	33	17.28
	23	48	25.13
	More than 23	96	50.26
Program	BBA Finance	34	17.80
	BBA Marketing	119	62.30
	BBA Islamic Banking	32	16.75
	BBA Investment	5	2.62
	BA Information Management	1	0.52

Generally, the respondents in this study were aged more than 23 years old (50.26%; 96), followed by 23 years old (25.13%; 48), 22 years old (17.28%; 33) and less than 22 years old (7.33%; 14). All of the respondents were ex-students of UiTM Johor, who have taken the subject ENT530 during their studies.

In term of academic background, 62.30% or 119 respondents were ex-students of BBA Marketing. The data collection was done through online, where the link of the questionnaire was shared on Facebook. This explained why the high number of ex-students of the program answered the questionnaire.

5.3 Reliability Analysis

Table 2 shows the reliability results for all measurements tested in the study. There was a substantial variation of Cronbach's Alpha values for all variables ranging from 0.778 to 0.872.

Table 2: Reliability Statistics

Variable	Number of Items	Number of Deleted Items	Cronbach's Alpha
University Environment	7	-	.937
Personality Traits: Innovation	2	-	.599
Personality Traits: Leadership	4	-	.788
Personality Traits: Sociability	4	-	.826
Personality Traits:	4	-	.953

Planning			
Risk Taking	4	-	.835
Entrepreneurial Intention (DV)	5	-	.866

Nunnally and Bernstein (1994) suggested that when the Cronbach's alpha values are greater than .70, they are generally considered desired or adequate. Thus, this shows that all six (6) variables in this study met the threshold of the analysis. This suggests that the measurements of the university environment, risk-taking and personal traits (self-efficacy) and entrepreneurial intention were acceptable, valid and reliable.

5.4 Correlation Analysis

The results of the Pearson's correlations between all variables were illustrated in Table 3. All tested variables were positively and significantly correlated between the variables ($p < .01$). This shows that all variables had strong and positive associations between each other.

Table 3: Pearson Correlation Analysis

	INT	UNI	INO	LEA	SOC	PLA	RIS
Entrepreneurial Intention (DV) (INT)	1	.404**	.216**	.235**	.458**	.366**	.613**
University Environment (UNI)			.260**	.313**	.425**	.493**	.540**
Personality Traits: Innovation (INO)				.210**	.270**	.369**	.357**
Personality Traits: Leadership (LEA)					.413**	.417**	.320**
Personality Traits: Sociability (SOC)						.500**	.509**
Personality Traits: Planning (PLA)							.520**
Risk Taking (RIS)							1

** Sig.level at 2 tailed

Based on the data analysis, there are high correlation $n=0.613$ between risk-taking and entrepreneurial intention. In addition, there are a positive moderate correlation $n=0.458$ between personality traits-sociability and entrepreneurial intention. The university

environment has low correlation $n=0.404$, definite but small relationship with the entrepreneurial intention.

In addition, personality traits-planning and entrepreneurial intention are almost negligible relationship $n=0.366$. Furthermore, personality traits-leadership also almost negligible relationship $n=0.235$ toward the entrepreneurial intention. The last variable which is personality traits-innovation also almost negligible relationship $n=0.216$ toward the entrepreneurial intention. All the relationship is significant at 0.01 levels.

5.5 Multiple Regression Analysis

Regression analysis of coefficient test as exhibited in Table 4 was used to test the coefficient between the independent and dependent variables. The results from the table show that the beta of risk-taking was (0.558) followed by sociability (0.239) and university environment (0.075). Based on the result, risk-taking had the highest impact on entrepreneurial intention among UiTM Johor students with a beta value equal to 0.558.

Table 4: Multiple Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.763	.373		2.044	.042
UNI	.075	.077	.070	.977	.330
INO	-.031	.077	-.025	-.401	.689
1 LEA	-.020	.075	-.017	-.266	.790
SOC	.239	.089	.193	2.685	.008
PLA	-.005	.082	-.005	-.062	.950
RIS	.558	.086	.494	6.511	.000

a. Dependent Variable: INT

Dependent variable: Entrepreneurial Intention

According to the result, only two variables namely sociability and risk-taking were the significant factors affecting entrepreneurial intention among UiTM Johor students, whereby Sociability ($p=0.008$) and Risk Taking ($p=0.000$). On the other hand, the innovation ($p=0.689$), leadership ($p=0.790$) and planning ($p=0.950$) were not factors affecting entrepreneurial intention among UiTM Johor students. Regression analysis was conducted to fulfill the research objective to examine the relationship between the university environment, risk-taking and personal traits (self-efficacy) and entrepreneurial intention among UiTM Johor students. Based on regression analysis results, it can be concluded that risk-taking was the factor that mostly influences the acceptance of entrepreneurial invention practices with the t-value of 6.511, being the highest among all variables.

Table 5: Hypothesis Results

VARIABLES	NULL HYPOTHESIS	RESULT
University environment	There is no significant relationship between the university environment and entrepreneurial intention.	p=0.330 which is more than 0.05 H ₀ ACCEPTED
Personality Traits - Innovation	There is no significant relationship between Personality Traits – Innovation and entrepreneurial intention.	p=0.689 which is more than 0.05 H ₀ ACCEPTED
Personality Traits - Leadership	There is no significant relationship between Personality Traits – Leadership and entrepreneurial intention	p=0.790 which is more than 0.05 H ₀ ACCEPTED
Personality Traits - Sociability	There is no significant relationship between Personality Traits – sociability and entrepreneurial intention	p=0.008 which is less than 0.05 H ₀ REJECTED
Personality Traits - Planning	There is no significant relationship between Personality Traits – planning and entrepreneurial intention	p=0.950 which is more than 0.05 H ₀ ACCEPTED
Risk Taking	There is no significant relationship between risk-taking and entrepreneurial intention	p=0.000 which is less than 0.05 H ₀ REJECTED

6. Conclusions and recommendations

Based on the result of the analysis, the risk-taking and personality traits – sociability seems to be an important factor toward the entrepreneurial intention. This is because the p-value is below than 0.05. While the other independent variable which is the university environment, personality traits – innovation, personality traits – leadership, and personality traits – planning is not significant in influencing entrepreneurial intention. This is because of the p-value more than 0.05.

The study shows that risk-taking is the best factor that can influence entrepreneurial intention. The person that handles the personal project and analyzes the variable can influence its results and make the best decision for the next phase (De Moraes, Lizuka, & Pedro, 2017). Furthermore, risk-taking is significant to the hypothesis.

As a recommendation, the university already has a great module and course outline that can enhance the entrepreneurial intention toward the student. While some of them use the opportunity as a preparation for having a business in the future. However, from the study, the student did learn about entrepreneurship. To ensure that the effectiveness of the case study, the university can offer guidance not only during the study but the university can offer monitoring and consultation after finished the study to

those have an intention to build their own business. On the other hand, the university also can offer a mentor to make them more enthusiastic in doing business.

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Factors on Drug Addiction: A Case Study at The Cure &Care Rehabilitation Centre (CRCC)

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Abstract

This study was carried out using purposive sampling method. A total of 180 questionnaires were distributed to one of the Cure & Care Rehabilitation Centre (CCRC) in the state of Kedah and only 151 are usable. Self-administrated questionnaire that comprised two parts of questions was applied. All of the respondents are male with majority of them are Malay (96.70%). One hundred thirty-seven (90.73%) of the respondents had secondary education level. The 17 items of questions on 151 respondents were analyzed using principal component analysis (PCA) with a Varimax (orthogonal) rotation. PCA revealed the presence of four components with eigenvalues more than 1. The identified four components are measures of religion, law awareness, peer influence and lifestyle. Multiple regression analysis was carried out to investigate the effects of explanatory factors of religion, law awareness, peer influence and lifestyle on drug addict. The model of this study is fit as the model is significant with F-value of 14.527 ($p < 0.01$). The R^2 value 0.286 indicates that the 28.6% of variations in drug addict is explained by the explanatory factors chosen in this study. Results shows that law awareness ($b = 0.408$, $p < 0.05$, BCa 95% CI 0.230, 0.290), peer influences ($b = 0.268$, $p < 0.05$, BCa 95% CI [0.146, 0.414], and lifestyle ($b = 0.096$, $p < 0.05$, BCa 95% CI [0.014, 0.174]) have significant and positive effect on drug addict. While, religion was having no significant effect on drug addict.

Keywords: Drug addicts, Lifestyle, Peer influence, Religion, Law awareness

1. Introduction

Drug addiction is a disease that affects a person's brain and behaviour and leads to an inability to control the use of a legal or illegal drug or medication. One would continue using the drug despite the harm it causes. An inability to stop using drugs at a young age and among millennial should be a concern to a nation. Addiction affects one's life includes relationship, career, health and psychology wellbeing.

Drug abuse and addiction has been a worrying issue for decades. Although enormous amount of budget has been allocated on the drug addiction programmes, the trend of drug addicts has escalated throughout years. The National Anti-Drug Agency has recorded the number of drug addicts nationwide from 2014 until September 2018 at 130,478, which is 0.40 per cent of the country's population. The youngest drug abuser on record is a 7-year old child. Of this, 80,068 (73.4 per cent) were youths aged between 19 and 39, 31,850 (19.6 per cent), were adults aged 40 and above, and 3,409 (2.3 per cent) were teenagers aged between 13 and 18.

In terms of ethnicity 88,522 are Malays which form the highest number of addicts, followed by the Chinese (7,883), Indians (7,689), Sabah Bumiputera (4,274) and Sarawak Bumiputera (713). Male addicts stood at 105,632 compared with females at 4,206. The numbers of cases for Bumiputera has fluctuated throughout years but have showed an increase of 20.7 per cent in 2018 compared to 2014. Whereas as for Chinese and Indians the number of cases have dropped by 19.0 per cent and 3.32 per cent respectively. The number of new cases has decreased by 5.2 per cent from 18,440 (2017) to 17,474 (2018). Whereas for relapse cases there was an increase by 4.2 per cent from 7,444,482 (2017) to 7,793 (2018) (AADK, 2018). It is estimated that currently, Malaysia suffers 70 new drug addicts daily (NST, June 2019).

The trend in drug abuse has changed from plant-based drugs such as marijuana and heroin to synthetic drugs such as *syabu* and ecstasy. However, methamphetamine drugs such as *syabu*, *pilkuda* and heroin were still the drugs of choice among abusers in the country in 2018. Regardless of the stringent enforcement and awareness activities put forward by the relevant authorities and institution, drug seizures by the authorities has risen in the past years. In 2017, RM292.2 million worth of drugs were confiscated and this has rose to RM516.3 million in 2018 (NST, 2019).

Peer influence, curiosity, having fun and stress are the four main reasons for using drugs apart from ignorance, lack of religious affiliation, financial problems, domestic violence and etcetera (AADK, 2018). It is important to identify the factors leading to drug addiction among millennial and to take proactive measures towards a free drug nation.

2. Literature Review

2.1 Lifestyle

Lifestyle has been identified as one of the primary determinants of drug abuse in the literature. This includes a report by Spooner and Hetherington (2004). The nature of interactions individuals has with the surrounding community have significant bearing on

the kind of activities individual is likely to participate in. The more an individual engage with people whose behaviour are particularly exposed to drug abuse, the more likely a non-drug abuser to fall into the same pattern of behaviour. This is corroborated in another study by Bloechliger et al. (2016). The authors however examined the risk associated with drug induced seizures. Nevertheless, it provides sufficient explanation that could be used to justify the inclusion of lifestyle as a determinant of drug abuse. Lifestyle choices include behaviour pattern in smoking, drinking and frequency to entertainment centres. These behaviour has been shown to correlate with substance abuse. Hence, it follows that it examining the risk factor associated with lifestyle in explaining drug abuse is crucial.

2.2 Religion

Religious education has long been associated with lower drug and substance abuse tendencies. Dalgarrondo, Soldera, Corrêa Filho and Silva (2004) for instance investigated the trend of drug abuse for students by means of convenience sampling from seven schools in Brazil. The researchers confirmed the results of previous authors where there is significant relationship between religious education and history of drug abuse. In particular, students with weak or no religious education had strong inclination towards abuse of medicinal drugs and intake of cocaine. Another study by Zanto, Hennigan, Östberg, Clapp and Gazzaley (2011) examined the multidimensional effects of religiosity on substance abuse. The authors rightfully identified that increased church attendance, matched by sound religious education is associated with lower substance abuse. That is to say that church or any worship attendance does not necessarily lead to reduced risk of substance abuse. The key to lower substance abuse therefore boils down to education. In particular, religious education which tends to emphasize on spiritual wellbeing often stands in contrast to substance abuse since any substance intake that physically diminishes one's capacity tends to have the same effect on the spiritual dimension.

2.3 Law

The literature is replete with evidence of correlation between law enforcement and drug abuse cases. For instance the stance taken by Strathdee et al. (2015) is echoed by Blaustein, McLay, and McCulloch (2017) through a 'secondary harm mitigation' framework, which aims to improve the conduct of international drug law enforcement agencies, so as to align with accepted human rights codes. Policies aimed to confront commercialization and transportation of illicit drugs should be in accordance with harm reduction principle. Analysis done by the authors point to the conclusion that many drug law enforcements are practically counterproductive. Delving deeper into humanitarian concerns reveal that most drug law enforcements are problematic, in that they do not place particular emphasis on the risk factors surrounding traffickers. Like consumption, trafficking of drugs usually involve vulnerable individuals who most probably have limited means of living. Additionally, the authors argue that it is important to consider that

individuals who partake in drug trafficking may come from such disadvantaged conditions as poverty, coercion and gendered submission to authority.

Moreover, these circumstances may render said individuals inadvertently complicit in not only trafficking, but often, consumption of illicit drugs. Enforcement without considering these dimensions' risks inflicting secondary harm to said individuals. A further analysis on the dichotomy between drug law enforcement ("laws in practice") and formal provisions of the law ("law on the books") is lucidly presented by Belackova, Ritter, Shanahan, and Hughes (2017). Comparing three disparate jurisdictions with various stringency level on drug law namely, Czech Republic, New South Wales (NSW), Australia and Florida, the United States, the authors find differing levels of "laws in practice". Adjusting for population, the authors find that enforcements, represented by criminal arrests, in somehow more stringent in Czech Republic and NSW despite decriminalization in "law on the books". Such apparent inconsistency needs to be addressed so as not to render the multi-faceted effort to overcome drug abuse ineffectual.

2.4 Peer Influence

Collegial sway may also hold more gravity in cases where potential abusers are plagued with low self-efficacy (Blevins, Stephens, Walker, & Roffman, 2014). In the usual social construct of young adults, one may feel the need to prove self-worth, in order to be considered entry into the social circle. With a low sense of self-efficacy, a subject may be more inclined to heed the instructions from members of the social circle, without much regard to the cost and benefit of doing so. As such, it is common to find that abusers fit this psychological profile. However, there are nuances to this psychological-substance abuse relationship. That is, scientists have discerned the frequency of usage with psychological profile of users. In a study conducted by Buckner, Ecker, and Cohen (2010), young college students with some form of psychological impairment are associated with less frequent substance abuse. On the other hand, subjects with academic difficulties are associated with more frequent substance abuse. Based on these findings, we expect that intoxication has more to do with pressure than it has with psychological disorder. This is an important observation as this paper does not delve into psychological impairment effect in its analysis and place greater emphasis on external influences instead. Nevertheless, an interesting finding reported by Buckner et al. (2010) that could be of great influence to this study is that abusers with higher frequency of intoxication display a greater interest in treatment and management of addiction. This suggests that despite heavy external pressure and peer pressure, abusers may be willing to engage in rehabilitative procedures, given assurances that their decision will not result in dire repercussion is offered. Otherwise, it would be a hindrance for abusers to seek treatment in the first place.

3. Methodology

This study was carried out using purposive sampling method. A total of 180 questionnaires were distributed to one of the Cure & Care Rehabilitation Centre (CCRC) in the state of Kedah and only 151 are usable. Self-administrated questionnaire was applied that comprised two parts of questions. The first part identifies the demographic profile of the respondents and the second part examines the four potential factors of drug addict. A five-point Likert scale ranging from “strongly disagree” to “strongly agree” was utilized.

Factor analysis is applied in the study to classify the factors of drug addict. Factor analysis is used to identify a relatively small set of factors which can be used to symbolized relationships among variables. Factor analysis presents a geometrical illustration that allocates a visual description of behavior relationships (Raven, 2004). Furthermore, multiple regression analysis was applied to analyze the relationship between the explanatory factors (i.e. religion, law awareness, peer influence and lifestyle) and drug addicts.

3.1 Analysis Results and Discussion

The demographic characteristics of the respondents in this study are presented in Table 1. All respondents are male. Most of the respondents are Malay (96.70%). One hundred thirty-seven (90.73%) had secondary education level.

Table 1Demographic characteristics of the respondents (n = 151)

Characteristics	n	%
Ethnic		
Malay	147	96.70
Chinese	1	0.01
Indian	3	0.02
Religion		
Islam	1	0.01
Buddha	3	0.02
Hindu		
Education		

Primary school	14	9.26
Secondary school	137	90.73
Diploma and pre-university	1	0.01

Based on Table 2, 146 respondents responded to the question pertaining to the ability to do without drugs and knew about the danger of the drugs. From the 146 respondents, only 108 respondents (74.0) per cent of the respondents are able to go through the days without drugs since there are at the rehabilitation centre and getting treatment for their addiction. However, 22.6 per cent still rely on drugs. Table 3 reveals that 93.2 per cent knew about the danger of drugs addiction and only 6.8 per cent said that they do not know about the danger of it. Neither nor

Table 2 Days without drugs (n = 151)

Characteristics	n	%
Yes	108	74.0
No	33	22.6

Table 3 Know the danger of drugs (n = 151)

Characteristics	n	%
Yes	136	93.2
No	10	6.8

The 17 items of questions on 151 respondents were analyzed using principal component analysis (PCA) with a Varimax (orthogonal) rotation. An examination of Kaiser-Mayer-Olkin measure of sampling adequacy (KMO = 0.666) and the Barlett's Test of Sphericity is significant indicates that the sample was sufficient for factorable of the correlation matrix.

Table 4 presents the results of orthogonal rotation. Following Hair et al. (2010), four-factor matrix were identified with a simple structure for factor loadings more than 0.50. PCA revealed the presence of four components with eigenvalues more than one. The identified four components are measures of religion, law awareness, peer influence and lifestyle.

The Factor 1, Religion, was comprised of five items that explained 12.946% of the variance with factor loadings ranged from 0.660 to 0.856 and eigenvalue of 4.790. There were six items in factor 2, Law Awareness, in which it explained 12.099% of the variance and eigenvalue of 4.477 with factor loadings from 0.512 to 0.733. Factor 3 represents Peer Influence comprised of four items that explained by 8.844% of variance with eigenvalue of 3.727 and the factor loadings were ranged from 0.512 to 0.713. Two items were grouped under factor 4, Lifestyle that explained 5.204% of the variance and eigenvalue of 1.925 with factor loadings of 0.567 and 0.606. The values of Cronbach Alpha for the four factors that have been identified were 0.895, 0.774, 0.693 and 0.901.

Table 4 Rotated Component Matrix

Items	M	SD	Component			
			1	2	3	4
<u>Religion</u>						
I live my life according to the God's command.	3.233	1.217	0.856			
I pray to God every day.	3.320	1.228	0.829			
I uphold my religion faithfully	3.033	1.172	0.824			
I consider myself a religious person.	3.400	1.274	0.745			
I live a lifestyle that blessed by God	3.330	1.202	0.660			
<u>Law awareness</u>						
The government has made enough effort to educate society on drug issues	4.340	0.895		0.733		
I know where to report if I have drug abuse information.	4.252	0.942		0.711		
I will report to authority if I witness any drug abuse case.	4.068	1.083		0.668		
I fully support any anti-drug abuse campaign.	4.449	0.812		0.661		

I know that drug abuse is illegal	4.435	0.759	0.615	
Law enforcement in this country is sufficient to curb drug abused	4.116	1.162	0.512	
Peer influence				
I always borrow money to accommodate to my everyday spending.	2.548	1.355	0.713	
I can easily get drugs when I am with my friends	3.386	1.157	0.675	
I enjoy smoking or vaping with my friends	3.980	1.027	0.547	
Many of my friends enjoy smoking or vaping	4.322	0.894	0.512	
Lifestyle				
I regularly go to places such as clubs, disco & bar to meet my friends.	2.667	1.436	0.606	
I regularly hang out to places such as clubs, disco & bar with my friends at night.	2.660	1.418	0.567	
% of variance		12.946	12.099	8.844 5.204
Total of Eigenvalues		4.790	4.477	3.272 1.925
Cronbach alpha		0.895	0.774	0.693 0.901

Table 5 Results of bootstrapped multiple regression analysis

	Beta	S.E	t	p-value	BCa 95% CI	VIF
Constant	0.447	0.0432	1.035	0.302	(-0.494, 1.279)	
Religion	0.002	0.051	0.032	0.975	(-0.115, 0.103)	0.112
Law awareness	0.408	0.081	5.031	0.000	(0.230, 0.290)	0.054
Peer influences	0.268	0.069	3.899	0.000	(0.146, 0.414)	0.112
Lifestyle	0.096	0.041	2.318	0.022	(0.014, 0.174)	1.193
F = 14.527 (0.000)						
R ₂ = 0.286						

Multiple regression analysis was then carried out to investigate the effects of explanatory factors of religion, law awareness, peer influence and lifestyle on drug addict. The test of normality, Shapiro-Wilk test ($p < .000$) indicates that data distribution is not normally distributed. As the assumption of normality was not met, therefore, the bootstrapped multiple regression 95% bias corrected confidence interval based on 1000 replications was used for robustness of the sample. The results of bootstrapped multiple regression results were shown in Table 4.

The model of this study is fit as the model is significant with F-value of 14.527 ($p < 0.01$). The R^2 value 0.286 indicates that the 28.6% of variations in drug addict is explained by the explanatory factors chosen in this study. Results shows that law awareness ($b = 0.408$, $p < 0.05$, BCa 95% CI 0.230, 0.290), peer influences ($b = 0.268$, $p < 0.05$, BCa 95% CI [0.146, 0.414], and lifestyle ($b = 0.096$, $p < 0.05$, BCa 95% CI [0.014, 0.174]) have significant and positive effect on drug addict. While, religion has no significant effect on drug addict.

Peer influence as a factor that led to drug abuse among the respondents is consistent with studies by Lian (2013) and Saad et al (2015). Subsequently in 2018, Saad et al conducted a research on college students which portray similar views on the factors leading to drug abuse. Most of the respondents blamed on 'influence by friends' or 'peer influence' caused them to take drugs. In this study, peer influence is still pertinent in influencing the factors that lead to drug addiction in the rehabilitation centre. Irrespective of one's age and background, peer influence seems to be a vital factor in influencing a person decisions to take drugs.

Lifestyle is significant in influencing youth in taking drugs. This is supported by Spooner and Hetherington (2004), and Bloechliger et al (2016). Lifestyle among the youth who enjoy being with friends, partying and entertaining could expose them to be in the wrong circle of people who might push them into taking drugs.

Although the majority of the respondents are Malay and Islam, religion is not a factor that deters them from taking drugs. This might probably due to the lack of practice and understanding of the religion that cause them to go against the teaching of Islam which forbids one from causing harm on oneself. Thus religion is not an influential factor for drug addicts.

4. Conclusions

Findings show that law awareness, life style and peer influence could be the factors to drug abuse among youth in the rehabilitation centre. Although law awareness is significant which means that respondents are aware of the enforcement carried out by the government, they are still not able to detach themselves from the substance used. Therefore, regular activities and campaign relating to the danger and consequences of drug addictions should begin at a very young age. A lifelong and continuous campaign to create and raise awareness and concern among the young should remain an upmost agenda to the government.

A stricter regulation on drug addicts and their family members might be needed to deal with the problem. Family members should be involved as they are the one closest that one relies on whenever they are face with problems. Lack of parental guidance as a factor for the increase in abuse among teenagers need to be further study. Drug addiction as a form of escapism, which predominantly affects those who are impoverished and living under the poverty line need to be addressed.

There might not be one solution to curb the problem of drug addiction but the involvement of the society at all level is crucial. As the majority of drug addicts are youths, government moves to ensure drug addiction is decriminalised could be put forward at the soonest because criminal conviction on drug addicts will destroy a youth's future as it will lead to a cycle of drug addiction. The scourge of drug addicts must be addressed by rehabilitation, which is a proactive approach to solve the issues relating to drug addictions. Drug is a youth problem and a society ravaged by the scourge of drug addictions especially among its youth would be a hazard to a nation. Therefore, it is the responsibility of all to change the people's hearts and minds on the social stigma.

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